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BRANCH OFFICE,
AUSTRALASIA:
NORMANBY CHAMBERS,
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Subscription: **10/- PER ANNUM**, Post Free to any Part of the World.

ESTABLISHED IN

ENGLAND ... 1859.
AUSTRALASIA ... 1885.

[Registered for Foreign Transmission.]

Entered at Stationers' Hall.]

No. 404. Vol. XXXII.

JANUARY 14, 1888.

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SOLUBLE PREPARATIONS OF Saccharin

The New Chemical Substance possessing a Sweetening Power about 280 Times greater than Sugar.

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RED AND WHITE PRECIPITATE
PURE CALOMEL***& EVERY MERCURIAL PREPARATION***CONCENTRATED FRUIT ESSENCES & FLAVOURS****RASPBERRY ACID***SULPHITES & BISULPHITES OF LIME MAGNESIA POTASH & SODA***CYANIDES OF POTASSIUM****FOR GOLD & SILVER PLATING & PHOTOGRAPHY****LIQUID AMMONIA. 880.****REFINED CAMPHOR,***IN BELLS OR TABLETS, BY A NEW PATENT PROCESS.***AGENTS:****UNITED STATES—Mr. F. J. MACNAUGHTAN,**
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LEMON.
and of Guaranteed
Purity.
This Oil is unsurpassed
for aroma and
strength.

ESSENCES.
pared from Selected
Fruit by Special
Process.

ESSENCES
for Flavouring purposes,
and Confectionery,
of every
description.

ESSENCES
for Confectionery.
of guaranteed purity
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brilliance.

ALL MATERIALS
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for Mineral Water
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ESSENTIAL OILS
OF GUARANTEED PURITY

PURE CONCENTRATED
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ESSENCES.

FRUIT-ESSENCES

PURE COLORINGS
OF EVERY DESCRIPTION

ANALYTICAL AND CONSULTING CHEMISTS
- TO THE TRADE.

"Extra Quality"
Soluble Essence of
JAMAICA GINGER.
For Aerated Beverages,
Cordials, Syrups, &c.
This Essence is
unequalled.

FINEST
SOLUBLE ESSENCES
OF EVERY DESCRIPTION,
for the production of perfect
Aerated Beverages,
Cordials,
Syrups,
&c.

Soluble,
Brilliant,
Permanent,
COLOURINGS.
Of Guaranteed purity,
for Brewers, Rectifiers,
Mineral Water
and Cordial
Makers.

American
FOAM SYRUP.
For giving a close Cream
Head to all Beverages.
One Pound is sufficient
for 150 gallons of
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THE "SANITAS" COMPANY LIMITED.

(Contractors to H.M.'s Admiralty).

Letchford's Buildings, Three Colt Lane,

Bethnal Green, E.

London, January 7, 1888.

To

THE CHEMISTS AND DRUGGISTS

of

GREAT BRITAIN and IRELAND.

Sole Manufacturers of "SANITAS" Disinfecting, Toilet and Veterinary Fluids, Powders, Soaps, &c.

Gold Medals, Antwerp Exhibition, 1886, and Exposition du Travail, Paris, 1885.

First-Class Certificate and Gold Medal, Calcutta International Exhibition, 1883-1884. Medal, Sanitary Institute of Great Britain, 1882. Silver Prize Medal (Highest Award) National Health Society's Exhibition, 1883. Award, International Medical and Sanitary Exhibition, 1881.

"Sanitas" Disinfecting Fluid.

"Sanitas" Disinfecting Oil.

"Sanitas" Disinfecting Emulsion.

"Sanitas" Crude Disinfecting
Fluid.

"Sanitas" Insecticide and Liquid
Soap.

"Sanitas" Sheep Dip.

"Sanitas" Toilet Fluid.

"Sanitas" Disinfecting Powder.

"Sanitas" Tooth Powder.

"Sanitas" Toilet Powder.

"Sanitas" Disinfecting Bar Soaps,
No. 1 and No. 2.

"Sanitas" Disinfecting Soft Soaps,
No. 1 and No. 2.

"Sanitas" Antiseptic Toilet Soap.

"Sanitas" Brown Windsor Soap.

"Sanitas" Animal Soap.

"Sanitas" Soap Powder.

"Sanitas" Jelly.

"Sanitas" Veterinary Ointment.

"Sanitas" Disinfecting Furniture
Cream.

"Sanitas" Disinfecting
Fumigators.

"Sanitas" Antiseptic Gauze.

"Sanitas" Air Purifier.

"Sanitas" Urinal Tablets.

"Sea-Water Sanitas."

"Sanitas" Disinfecting Saw-Dust.

Dear Sirs,—

Messrs. THOMPSON & CAPPER, of Liverpool, having directed our attention to the similarity of the Mottoes forming part of our respective Registered Trade Marks, as here shown:—



THE
"SANITAS"
COMPANY'S
MARK.



MESSRS.
THOMPSON &
CAPPER'S
MARK.

We have pleasure in informing the Trade that, in consequence of an arrangement made with that firm, we have decided to give up the use of our Mark, above shown, in connection with our Toilet Preparations as from 1st March next, and also in connection with all our other Preparations so soon as our present stock of articles and things so marked shall be exhausted.

Thereafter, all our "Sanitas" Proprietaries will bear only the two Registered Trade Marks, as follows:—

"SANITAS"



"SANITAS"

THE
"SANITAS"
COMPANY'S
TRADE MARKS.

Yours faithfully,

C. T. KINGZETT, Managing Director.

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THE
PARTICULAR ATTENTION
OF THE
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IS CALLED TO THE NEW EDITION OF

PRICES CURRENT

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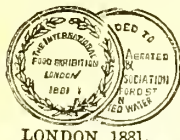
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LONDON, 1881.

THE

CHEMISTS'

HIGHEST PRIZE MEDAL.



BRADFORD, 1882.

AERATED & MINERAL WATERS ASSOCIATION, L^d.

LONDON. HARROGATE. BRISTOL.

This being the ONLY Company that supplies EXCLUSIVELY TO CHEMISTS AND HOSPITALS manufactured Mineral Waters of the highest class, and of specified formula, the Directors trust to be favoured with a sample order.

Carbonated Water	At per dozen BOTTLES SYPHONS 1/ 1/6	Lemonade	At per dozen BOTTLES SYPHONS 1/ 2/6
Soda Water, 5 grains to $\frac{1}{2}$ pint		Ginger Ale	
„ B.P., 15 „ „		„ Beer	
Pot. Water, 5 „ „		Lime Juice	
„ B.P., 15 „ „		Lithia Water	1/6 2/6
Seltzer Water		Iron and Quinine	
		Mineral Acid	

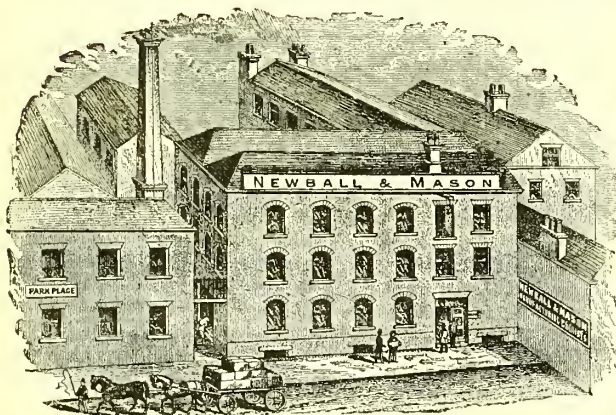
Bottles at 1/6 per doz.; Syphons, 24/; Cases, 3 doz., 3/6; 4 doz., 4/6; 6 doz., 5/6; Syphon Cases at 2/6
 Sparkling Rubine... .. } At 2/6 per dozen in pint Champagne Bottles.
 Zoedone... .. } Bottles included.
 3d. per dozen charged for carriage on Syphons in London.

NATURAL MINERAL WATERS SUPPLIED AT LOWEST PRICES.

NON-INTOXICATING BEER

PRODUCED AT A SMALL COST AND LITTLE TROUBLE.

ONE TABLESPOONFUL MAKES A GALLON.



MASON'S ORIGINAL

EXTRACT OR ESSENCE OF HERBS

(REGISTERED).

Composed of Yarrow, Dandelion, Comfrey, & Horehound.

FOR THE SPEEDY PRODUCTION OF

HERB OR BOTANIC BEER.

This invaluable preparation is carefully compounded from the above well-known Herbs. Notwithstanding so many imitations got up to resemble the original, it stands unrivalled for the production of a most delicious, wholesome, and non-intoxicating beverage, full of body and flavour, and a rich creamy head like bottled ale.

INVENTORS AND MANUFACTURERS—

NEWBALL & MASON, Chemists
Park Place, NOTTINGHAM.

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COLONIAL AGENTS WANTED.

BEWARE OF OTHERS WHO PRINT
BEWARE OF OTHERS USING the same
BEWARE OF ALL IMITATIONS.

MASON'S IS A SPECIAL COMPOUND,
 AND THE ORIGINAL PREPARATION.

ALL OTHERS ARE Substitutes.

Sold in Bottles, 6d., 1s., 2s., 5s., and 20s. each.

Is not Affected by Climate or Weather.

Prices, Circulars, Show Cards, &c., on application.

TO AERATED WATER MANUFACTURERS. HAY'S SOLUBLE + ESSENCES

ARE GUARANTEED TO BE THE FINEST IN THE MARKET.

HONOURABLE MENTION: INTERNATIONAL FOOD EXHIBITION, AGRICULTURAL HALL, LONDON, OCTOBER, 1880.

GOLD MEDAL: SOCIETY OF ARTS, PARIS, 1883.

HAY'S

HOP ALE ESSENCE.

"Supplies an excellent stomachic, appetising, and agreeable summer drink."

Brewers' Journal.

"For this Essence a brilliant future may be anticipated. It possesses characteristics very seldom to be met with."

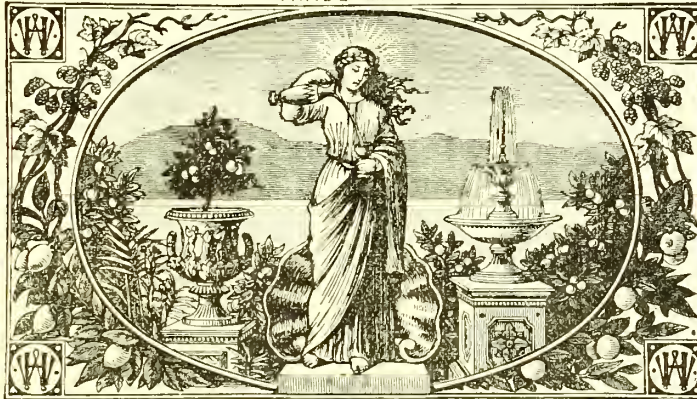
Mineral Water Trade Review.

HAY'S HOP ALE.

"This is an excellent Non-Alcoholic beverage."

The Lancet.

"Evolves a delicious aroma of Hops."—*Medical Press.*



GINGER CHAMPAGNE.

(Made from Hay's Essence.)

"An excellent and most agreeable beverage."

The Lancet.

"Mr. Hay has caught the fine aroma of ginger with remarkable success. It is equally sparkling but more refreshing than its rival, the Royal French Beverage."

The Chemist and Druggist.

GINGER ALE.

(Made from Hay's Fortified Essence.)

"It pours out with as fine a 'head' as any glass of ale, and possesses all the fine aromatic flavour of the pure ginger."

The Chemist and Druggist.

HAY'S SOLUBLE ESSENCE OF JAMAICA GINGER.

A Pure Essence of the Finest Ginger, perfectly free from Capsicum. Highly adapted for the manufacture of Transparent Aerated Waters, and for all Dietetic, Medicinal, and Pharmaceutical purposes. Trade Price, 5s. per lb.; 12 lbs. and upwards, 4s. 6d.

HAY'S COMPOUND FORTIFIED ESSENCE OF JAMAICA GINGER. FOR FIRST QUALITY GINGER ALE.

Specially prepared for the manufacture of the very Finest Ginger Ale made, is an addition of Vanilla, Lemon, and other flavours to the above. It imparts, with the exquisite Ginger Aroma of the above-mentioned Essence, a peculiarly fine fruity flavour, combined with the fullest amount of fragrance and pungency. Trade Price, 5s. 6d. per lb.; 12 lbs. and upwards, 5s. Quantity required, five fluid ozs. to each gallon of Syrup, making 106 10-oz. bottles.

HAY'S GINGER ALE EXTRACT. FOR SECOND QUALITY GINGER ALE.

This Extract is strongly recommended for the manufacture of Ginger Ale, to which it imparts Pungency, Colouring, great Brilliance, and an unusually Fine Ginger Flavour and Aroma, and makes a thoroughly good article. Trade Price, 4s. 6d. per lb.; 12 lbs. and upwards, 4s. Quantity required, three fluid ozs. to each gallon of Syrup, making 106 10-oz. Bottles.

HAY'S GINGER ALE ESSENCE. Highly Concentrated. FOR THIRD QUALITY GINGER ALE.

This Essence, which is a complete Bouquet of Flavours in a highly concentrated state, makes a Ginger Ale possessing an amount of aroma, flavour and quality that will be sure to command a large sale, and that is unsurpassed by the so-called finest Belfast Ginger Ale. Trade Price, 9s. per lb.; 12 lbs. and upwards, 8s. 6d. Quantity required, half a fluid oz. to each gallon of Syrup, making 106 10-oz. Bottles. This Essence will be found most valuable to the general trade.

HAY'S GINGER CHAMPAGNE ESSENCE.

For the manufacture of Ginger Champagne. This Essence is a combination of the finest flavours, and imparts with the Ginger a most exquisite aroma, making a most delicious and refreshing approximation to Champagne. Trade Price, 8s. per lb.; 12 lbs. and upwards, 7s. 6d. Quantity required, ten fluid ozs. to each gallon of Syrup, making 106 10-oz. Bottles.

HAY'S SOLUBLE ESSENCE OF MESSINA LEMONS.

A magnificent Preparation, perfectly soluble, and makes the finest Lemonade obtainable. Trade Price, 8s. 6d. per lb.; 12 lbs. and upwards, 8s. "Added in the proportion of one fluid oz. to each gallon of Syrup, the Soluble Essence imparts the most delicious flavour of the Lemon."—*The Chemists' Journal.*

HAY'S LEMON FLAVOUR. (Perfectly Soluble.)

Trade Price, 5s. per lb.; 12 lbs. and upwards, 4s. 6d. Quantity required one and a half fluid oz. to each gallon of Syrup making 106 10-oz. Bottles.

HAY'S HOP ALE ESSENCE.

This Essence is made from the Choicest Hops grown, and is unrivalled for its peculiarly fine Hop flavour and aroma. Hop Ale made from this Essence has the full flavour of the finest Hops, and is a really appetising Bitter Beer. Trade price, 8s. 6d. per lb.; 12 lbs. and upwards, 8s. Quantity required, two fluid ozs. to each gallon of Syrup, making 106 10-oz. Bottles.

For Orange, Vanilla, and all other Essences send for Price List.

[2]

W. HAY, Manufacturing Chemist, Beverley Rd., **HULL.**
ENGLAND.

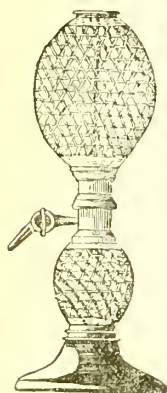
The difference between preparations made from HAY'S ESSENCES and those made from the numerous SPURIOUS IMITATIONS of them bearing the name of SOLUBLE ESSENCES is most marked, and no manufacturer using the latter can compete with one using HAY'S PREPARATIONS, as is universally known.

Indentors, to prevent disappointment, should specify that the Goods are to be of HAY'S MANUFACTURE.

“THE BEST NATURAL APERIENT.”

Persistent attempts are made by interested parties to deceive the public by offering Natural Mineral Aperient Waters with marks, names, and designations very similar to those which are used by the **APOLLINARIS COMPANY, LIMITED**, for the **NATURAL MINERAL APERIENT WATERS** imported by them.

Under these circumstances the **APOLLINARIS COMPANY, LIMITED**, feel compelled to caution the public that the **HUNGARIAN BITTER WATER** sold by the **COMPANY** always bears the name of the **APOLLINARIS COMPANY, LIMITED**, on the Label.



BRIET GAZOGENES

5 Pint size	..	..	..	18/3 each.
3 "	..	..	..	13 - "
2 "	..	..	..	10.6 "

**SYPHONS, GAZOGENES,
AND SELTZOGENES
REPAIRED.**

POWDERS

**BRIET
POWDERS**

ARE THE BEST FOR

BRIET GAZOGENES

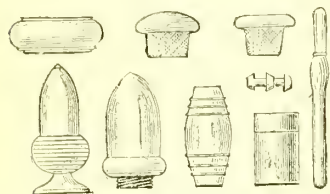
In Boxes	{ 5 Pint size.....	40/- per dozen boxes.
of	{ 3 "	24/ "
12 Charges each	{ 2 "	20/ "

SELTZOGENE POWDERS.

In boxes of	{ 5 Pint size.....	33/- per dozen boxes.
12 Charges each	{ 3 "	24- "

ALL GUARANTEED PURE TARTARIC ACID & BICARB OF SODA.

Apply to **FAVARGER & CO.,** 76 TURNMILL STREET, LONDON, E.C.



**IRVIN &
SELLERS,
WOOD TURNERS,
PRESTON.**

By Special Appointment to
H.R.H. the Duke of Connaught and the Royal Family



BOURNE WATERS.

THE PUREST IN ENGLAND.

R. M. MILLS & CO.,

BOURNE, LINCOLNSHIRE,

MANUFACTURERS OF

**SODA, POTASH, LITHIA, AND SELTZER WATERS,
LEMONADE, AND AROMATIC GINGER ALE.**

4-dozen and 6-dozen Cases Carriage Paid.

Prices and Pamphlet on application. Agents appointed.

Messrs. INGRAM & ROYLE, 52 Farringdon Street, Wholesale Agents
for the sale of our Waters.

“ABSOLUTELY PURE.”



REGISTERED.

ELLIS'S RUTHIN WATERS.

ESTABLISHED 1825.

Soda, Potass, Seltzer, Lemonade, Aromatic Ginger Ale.
For Gout: Lithia Water, and Lithia and Potass Water.

ASK FOR ELLIS'S.

SOLD EVERYWHERE.

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For quotations of all descriptions see Druggists'
Sundries List of undersigned.

See Advertisement, page 5.

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Liqueurs

Natural Wines

Lime Juice

Syrups

Essences

BEST GOODS. LOWEST PRICES.

For Further Particulars see "Chemists' and Druggists' Diary," page 211.

IDRIS & COMPANY,

Manufacturing Chemists, Mineral Water Makers, Syphon and Seltzogene Manufacturers,
EXPORT AND IMPORT MERCHANTS,

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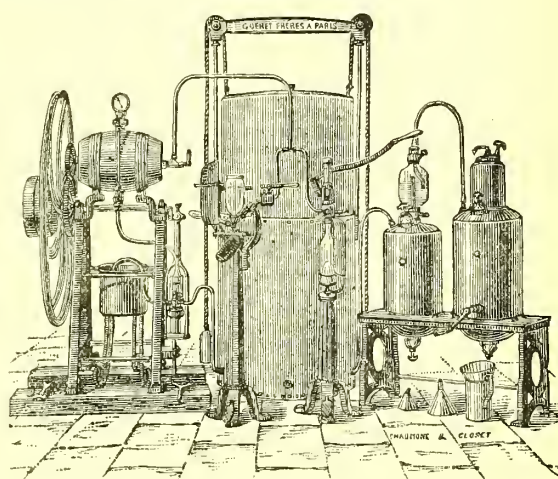
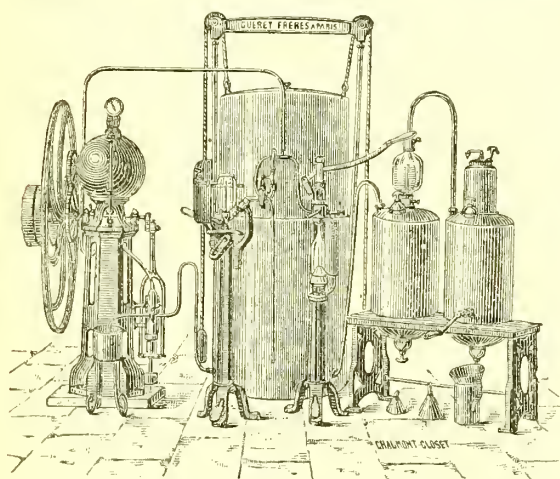
Mechanical Engineers, privileged in France and Abroad,
72, BOULEVARD DE LA GARE, PARIS.

GOLD MEDAL, AMSTERDAM, 1883.

PLANT & SYPHONS FOR THE MANUFACTURE OF AÉRATED BEVERAGES,
WITH ALL THE LATEST IMPROVEMENTS.

COMPLETE CONTINUOUS APPARATUS, SPHERICAL OR PEAR-SHAPED.

The Saturator is of brass, guaranteed free from every defect in construction and perfect in action, tested at high pressure, combining economy with the greatest sanitary security, and enjoying an unrivalled reputation.



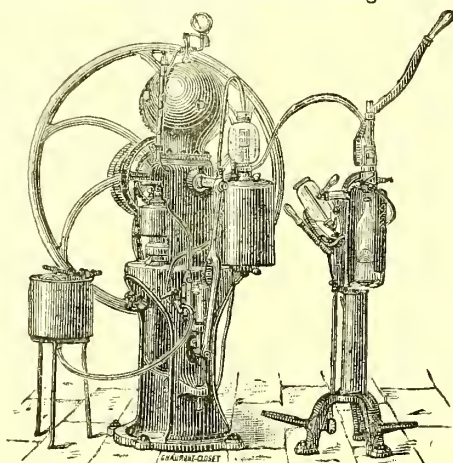
SYPHONS

With small levers, fittings of metal of highest quality, and best glass.



CONTINUOUS APPARATUS

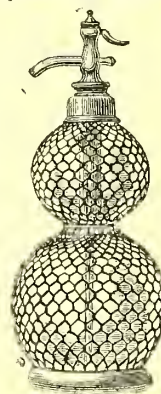
For the automatic generation of carbonic acid gas, the only practical system applicable to the manufacture of Aërated Beverages.



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For the instantaneous production of Aërated Beverages at table.

Any one can use them.

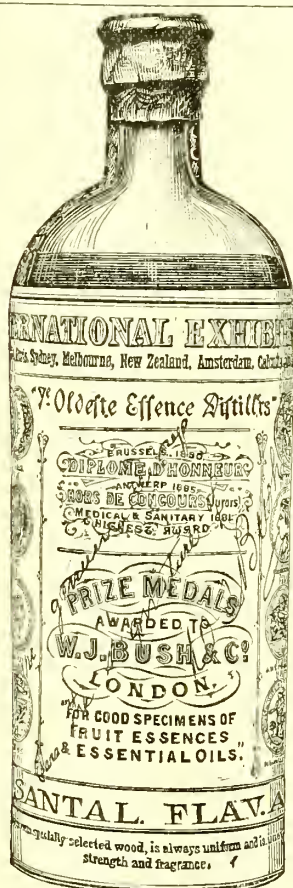


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Packed in Original 1-lb. Bottles.

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Ol. Amygd. Essent. Ang.
Ol. Anethi Ang.
Ol. Anthemid. Ang.
Ol. Carui Ang.
Ol. Caryoph. Ang.
Ol. Cinnam. Ver. Ang.
Ol. Copaibæ Ang.
Ol. Coriand. Ang.
Ol. Cubebæ Ang.
Ol. Juniperi Ang.
Ol. Menthæ Pip. Ang.



Ol. Myristicæ Ang.
Ol. Pimentæ Ang.
Ol. Santal. Flav. Ang.
ALL OWN DRAWING.

Ol. Bergamot, Extra
Ol. Eucalypti, Extra
Ol. Lavand. Flor., Extra
Ol. Limonis, Extra
Ol. Rosmar., Extra

DIRECT IMPORTATION.
Specially Selected.

It is imperative that Chemists and others requiring Essential Oils for medicinal purposes should purchase genuine and finest qualities only. These can only be obtained from W. J. BUSH & CO., who supply them as above, in 1-lb. Bottles, and guarantee their quality and purity. *Nearly all Essential Oils offered in the Market are impure.*

W. J. BUSH & CO.,
MANUFACTURING CHEMISTS, DRAWERS OF ENGLISH ESSENTIAL OILS,
ARTILLERY LANE, LONDON. Works—ASH GROVE, HACKNEY.

YOU DIRTY BOY!



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BARNETT & FOSTER.....	Airated Water Machinery	OUTSIDE COVER	Hoover 41, Puff Boxes 42, Sponges 42, Tooth	PEARS SOAP.....	Yon Dirty Boy!	
BARRETT, R. H.....	The Heart Scent Bottle	37	Brushes.....	PERKEN, SON & RAYMENT.....	Cameras and Lenses	
BATES, F. W.....	"Frizzetta"	41	EXCHANGE COLUMN.....	PHILLIPS, G. & CO.....	Pure Spirits or Wine	
BATTLE, J. R.....	Vermine-Killer	43	FAYARGER & CO.....	POTHS, H., & CO.....	Bottles	
BELLMARTIN, J. F., & CO.....	La Brillante	41	FENNINGS, ALFRED.....	POTTER & CLARKE.....	Composition Bottles	
BECK, A. N.....	Hop Bitters	33	FINK, F., & CO.....	POWELL, T.....	Balsam of Anised	
BEEZLER, J. & CO.....	Salubrious Saline, Blood Mixture,	50	FLETCHER, FLETCHER & STEVENSON	PRICE'S CANDLE CO.....	Glycerine	
BOORD & SON.....	Cough Balsam, Hops and Bitters	42	Ext. Cinchona Liq. (De Vir)	RAIT, G. L., F.C.S.....	Analytical Chemist	
BOWEN, W. H. & GREY.....	Spirits of Wine	22	GIBSON, R.....	RAPIHAEL & CO.....	Spectacles, &c.	
BOWDLER, W. H. & CO.....	Spectacles	22	GOVERNMENT, THE, SANITARY CO.....	RAITI, S., & CO.....	Mucrophine	
BRAWELL & SON.....	Chemicals	44	GREEN, S.....	ROBINSON, B.....	Pain Expeller, TEXT	
BREFFITS, E., & CO.....	"International" Feeding Bottles	37	GREENGLASS, T. S., & SON.....	ROGERS, T., & CO.....	Pharmaceutical Sherry Wine	
BRINJES & GOODWIN.....	Evaporating Pans, TEXT	32	GREGORY, W.....	ROGERS, T., & CO.....	Improved Dispensing Sale	
BROMLEY & CO.....	Bromo Iodine Mineral Waters.....	46	GRINDLEY & CO.....	SAINSBURY, S.....	Laender Water	
BRUMLEY, C.....	Pelletier's Quinine	33	GURKET FRERES.....	SANITAS, THE, CO., LIM. Disinfectant 4, TEXT	SAUNDERS, J. W.....	Private Tutor
BURROUGHS, WELLCOME & CO.....	The Advancers of '87, 24, 25, 26	11	HARKER, STAGG & MORGAN.....	SCHOOL OF PHARMACY.....	Of the Roses	
BUSH, W. J., & CO.....	Essential Oils	11	HARRIS, P., & CO.....	SHIPPOFF & CO.....	Of the Roses	
BUSH, W., SON & CO.....	Marigoldine	27	HARTSON & CO.....	SHIRLEY, A. W.....	Al Menthon Oils	
BUSINESSSES FOR DISPOSAL.....	Coloured Supplement	TEXT	HAYNES & CO.....	SILICATED CARBON FILTER.....	Filters 16, TEXT	
CADBURYS BROS.....	Cocoa Essence.....	COVER	HAYWARD TYLER & CO.....	SLACK & BROWNLOW.....	Filters—TEXT	
CARTER, J. H.....	Coloring Materials	32	HEARN, E. A., & CO.....	SMITH, T. H., & CO.....	Salts of Morphine	
CENTRAL INSTITUTION OF THE CITY & GUILDS OF LONDON INSTITUTE.....	Coloured Supplement	6	HERTZ & COLLINGWOOD Jnsn's Cod Liver Oil	SMITH, T. J.....	Cod-liver Oil	
CHEMBROUGH MANUFACTURING CO.....	Faceline	26	HERZELINE, WM. & SON.....	SODEN MINERAL PRODUCE CO.....	Pastilles	
CHRISTIE, CARLOS J. & CIA.....	General Commission Agents	25	HOP BITTERS CO., THE.....	SPENCER & CO.....	Teas	
CLARK, S., & CO.....	The "Syphon" Heating Stone	37	HORN & SON.....	SPRING & CO.....	Kept Milk Drink	
COLEMAN & CO.....	Libby's Meat and Malt Wine	17	HUGHES, W. C.....	STEINIGER & CO.....	Drug and Spice Merchants	
COLEMAN, F. B.....	Damiana Waters	35	HUNYADI JANOS.....	STEPHENSON & TRAVIS.....	Stupium	
CURRIE, J. A.....	Glass Bottles	31	IDRIS & CO.....	STERN, G. & G.....	Pumilio Pine	
CURTIS & CO.....	Effervescent Granules	31	INGRAM & ROYLE.....	STEVENSON & HOWELL.....	Soluble Essences	
DARTON, F., & CO.....	Spectacles & Clinical Thermometers	21	ISAACS, I., & CO.....	SUTTON, OSCAR, & CO.....	"O.S." Tooth Block	
DA SILVA & CO.....	Dr. Lucke's Wafers	45	JAMES, W. H.....	TODD, A. M., "Crystal White" Oil of Peppermint	To Good Wood	
DE PASS, E. A., & CO.....	Petrolina	35	KEARLEY & TONGE.....	TREATH, R. C.....	Perfumeries	
DOULTON & CO.....	Filters	16	KERNICK & SON.....	TYLER, E. KING.....	Chemicals	
DOWNE, B. I. P. CO.....	Eucalyptus Globulus	43	KILNER BROS. Feeding and Dispensing Bottles	TYLER, E. KING.....	Borough Ketchup	
DOWNING, J. S.....	Toilet Papers	23	KIMPTON, R. J. Practical Manual of Veneral and Generative Diseases	UNIVERSAL SIMPLEX TYPE WRITER.....	Acetic Acid	
DURANT & CO.....	Orange Wine	44	KING, F., & CO.....	USINES DES MOULINS.....	Acetic Acid	
ELLIMAN, SONS & CO.....	Embrocation TEXT	46	LAIRITZ PINE WOOL.....	WALKER & DALRYMPLE.....	Teas	
ELLIS & SONS.....	Airated Waters	8	LALOR, DR.....	WERNER & FELDREBER.....	Machinery	
ESCHMANN BROS. & WALSHE.....	Soft Flexible Catheter	41	LAZARUS & SONS.....	WEST, T.....	Per	

Whose Announcements appear in "THE CHEMIST AND DRUGGIST." Those whose Names do not appear above are published in one of the other issues of this month.

ACETIC ACID Dunn and Co. Morris and Callard (Salts) Usines des Moulins	DITTO PLANT [see SPYNNON and ESSENCE.] Barnett and Foster Bratby and Hinchliffe Bush, W. J., and Co. (Foam Producer, &c.) Favarger, H. Gueret Frères Meadowcroft, W. Tyler, Hayward, and Co.	ALMANACKS Ford, Shapland and Co. Silverlock, H. Townsand, C. ALMILAJ Meret, L. AMMONIA May and Baker White, A., and Sons	BEESEW & HONEY BOTTLES Bowdler and Co. Kemp, W., and Son BICARB. SODA Gaskell, Deacon and Co. Howards & Sons May and Baker	Aire and Calder Bottle Co. Barrett, H. H. Barnett and Foster Bratby and Hinchliffe Breffit's (Lim.) Brooks, Peel (Perfumers) Curle, J. A. Dunlop, Mitchell and Co. (Tulies)
AERATED AND MINERAL WTS Æsculap Apollinaris (Hunyadi, Fried- richshall, and Apollinaris) Barnett and Foster (Spa) Bromley and Co. (Woodhead Carter, H. W., & Co. (Ginger Ale Essence) Chemists' Aerated Waters Association Draut, Geo., & Co. Ellis (Ruthin) Evans, Sons and Co. Harston and Co. Hay, W. Hassall and Co. (Citric Acid Phosphor) Hunyadi Janos Irlis and Co. Ingram and Royle (Mineral and Vichy, Sauerbrunn, Carlsbad) Jewsbury and Brown Mills and Co. (Bourne) Tannin Spring Natural Mineral Water Co. Taylor, T. and F. J. [See GINGER ALE.]	AGENCIES ABROAD Appleby and Halse Australasian Drug Co. Campbell, N. S. and Co. Christie, Carlos, J., and Cia Cocking (Japan) Evans, Sons and Mason (Canada) Fetton (Melbourne) Fouzera (New York) Kempthorne (N.W. Zealand) MacNaughten (New York) Prosser, E., and Co. (Sdney) Roberts (Paris, &c.) Rocke (Melbourne) Seaward & Co. (Auckland N. Z.) Soul, W. H., and Co. Stallman and Fulton	SANDAGES Bole Hall Mill Co. BATH GLOVES Maw, Son and Thompson Peterson, G. Stallcock Bros.	BISMUTH. PREP. Burroughs, Wellcome and Co. Learon, Squire and Francis Hewitt and Sons Howards and Sons May and Baker White, A., and Sons BLOOD MIXTURE Beezler, J., and Co. Lincoln and Midland Counties Drug Co. BOOKS Keene and Ashwell Kimpiton, R. Lewis, H. K. Loisette, Professor Lomemann, Green and Co. Robinson, G. H.	Evans, Sons and Co. (Pomade, Feeding, and Smelling) Hearn, E. A., and Co. Inance and Co. Kilner Bros. Pothe Thompson, Millard and Co. Toogood (Feeding)
MINERAL WTS Æsculap Apollinaris (Hunyadi, Fried- richshall, and Apollinaris) Barnett and Foster (Spa) Bromley and Co. (Woodhead Carter, H. W., & Co. (Ginger Ale Essence) Chemists' Aerated Waters Association Draut, Geo., & Co. Ellis (Ruthin) Evans, Sons and Co. Harston and Co. Hay, W. Hassall and Co. (Citric Acid Phosphor) Hunyadi Janos Irlis and Co. Ingram and Royle (Mineral and Vichy, Sauerbrunn, Carlsbad) Jewsbury and Brown Mills and Co. (Bourne) Tannin Spring Natural Mineral Water Co. Taylor, T. and F. J. [See GINGER ALE.]	ALKALOIDS Howards and Sons (Cinchona) Smith, T. and H Wink, J. A., and Co. (Lim.)	BATH GLOVES Maw, Son and Thompson Peterson, G. Stallcock Bros.	BOTANIC BEER Newball and Mason BOTTLE CAPS Hunt, W. F., and Co.	BOXES Austin and Co. (Cardboard) Evans, Sons and Co. (Pill and Cruin and Sellers Puff) Self-Opening Tin Box Co.
MINERAL WTS Æsculap Apollinaris (Hunyadi, Fried- richshall, and Apollinaris) Barnett and Foster (Spa) Bromley and Co. (Woodhead Carter, H. W., & Co. (Ginger Ale Essence) Chemists' Aerated Waters Association Draut, Geo., & Co. Ellis (Ruthin) Evans, Sons and Co. Harston and Co. Hay, W. Hassall and Co. (Citric Acid Phosphor) Hunyadi Janos Irlis and Co. Ingram and Royle (Mineral and Vichy, Sauerbrunn, Carlsbad) Jewsbury and Brown Mills and Co. (Bourne) Tannin Spring Natural Mineral Water Co. Taylor, T. and F. J. [See GINGER ALE.]	ALKALOIDS Howards and Sons (Cinchona) Smith, T. and H Wink, J. A., and Co. (Lim.)	BATH GLOVES Maw, Son and Thompson Peterson, G. Stallcock Bros.	BOTANIC BEER Newball and Mason BOTTLE CAPS Hunt, W. F., and Co.	BRUSHES Dukes and Co. Evans, Sons and Co. (Tooth and Toiletry Brushes, Hair) Sutton, O., and Co. (Tooth)
MINERAL WTS Æsculap Apollinaris (Hunyadi, Fried- richshall, and Apollinaris) Barnett and Foster (Spa) Bromley and Co. (Woodhead Carter, H. W., & Co. (Ginger Ale Essence) Chemists' Aerated Waters Association Draut, Geo., & Co. Ellis (Ruthin) Evans, Sons and Co. Harston and Co. Hay, W. Hassall and Co. (Citric Acid Phosphor) Hunyadi Janos Irlis and Co. Ingram and Royle (Mineral and Vichy, Sauerbrunn, Carlsbad) Jewsbury and Brown Mills and Co. (Bourne) Tannin Spring Natural Mineral Water Co. Taylor, T. and F. J. [See GINGER ALE.]	ALKALOIDS Howards and Sons (Cinchona) Smith, T. and H Wink, J. A., and Co. (Lim.)	BATH GLOVES Maw, Son and Thompson Peterson, G. Stallcock Bros.	BOTANIC BEER Newball and Mason BOTTLE CAPS Hunt, W. F., and Co.	BUTTER COLR. &c. Graham, W., and son (Meri- goldme) Johnsen and Jürgensen Oldfield, Pattison and Co. Tomlinson and Hayward

CAMPBOR

Howards and Sons
Keene and Ashwell (Thomson-
May and Baker (patent)
Murray, Sir James (Canada)

CAPSULES

Denoual, J. (Medicinal)
Duncan, Flockhart and Co.
(Cascara Sagrada)
Hooper, B., and Co.
Maw, Son and Thompson

CAPSULES (METALLIC)

Betts and Co.
Melin, C. (Machine)

CARMINE

Bush, W. J., and Co.
Sellers

CATALOGUE

Evans, Sons and Co. (Price Current)
Lagrain and Royle (Price List)
Maw, S., Son and Thompson
(Price Current)
Newbery and Sons
Sanger and Son
Thompson, Millard and Co.

CEMENT

Wilson, Walker and Co.
Winklemann and Co. (Liquor Glue)

CHALK PRECIP.

Dunn and Co.
Levermore, Ane. and Co
White, A., and Sons

CHEMICALS

Bramwell, E., and Son
Bush, W., and Co.
Dunn and Co.
Fletcher, Fletcher & Stevenson
Gaskell, Deacon and Co. (Bicarbonate of Soda)
Howards and Sons (Pharmaceutical)
Levermore, Aug., and Co.
May and Baker
Morris, Gallard, and Co.
Petri Bros.
Prunk, Davis and Co.
Stern, G. and G. (Pumiline)
Sumner, R., and Co.
Smith, T. and H., and Co.
Type and King
White, A., and Sons
Wink, J. A., and Co. (Fine)
Zimmermann, A., and M.

CHEST PROTECTRS

Evans, Sons and Co.
Lauritz
Maw, Son and Thompson
Pattison, G.
Wood, V.

CHLORATE OF**POTASH**

(Compressed Tablets)
Burroughs, Wellcome and Co.
Hooper, B., and Co.

CHLORIDE OF**LIME**

Government Sanitary Co.
National Chemical Co.
New Carbolic Sanitary Co., Ltd.

CHLORODYNE

Blyton-Bage and Co. (Twemlow's)
Burroughs, Wellcome and Co.
Davenport (Browns)
Towle, A. P.
Wakham, T., and Co.

CHLOROFORM, &c.

Duncan, Flockhart
Macfarlan, J. F.
Petri Bros.
Smith, T. and H.
Zimmermann

CITRIC ACID

Hassalls (Phospho)

COCAINE**HYDROCHLOR**

Howards and Sons

COCOA WINE

Armbrrecht, Nelson and Co.

COCOA & CHOCOLATE

Cadbury
De Jong's (Soluble)
Fry (Maltese)
Savory and Moore (Cocoa and Milk)

COD-LIVER OIL

Allen and Hanbury
Burgoyne (Pepteleins)
Burroughs, Wellcome
Hertz & Collingwood (Jensen's)
Smith, T. J.
Woolley, Sons and Co.

COFFEE

Symington and Co. (Coffee Essence)

COLLAPSIBLE**TUBES**

Betts and Co.
Brooks, H., Peel and Co.

COMBS

Goodall, H. A., and Co.
Sherlock Bros.

COMPOSITION**ESSENCE**

Potter and Clarke

CMRPSD MDCNS

Allen and Hanbury's
Burroughs, Wellcome and Co.
Hooper, B., and Co.

CONCENTRATED**LIQUORS**

Evans, Sons and Co.
Fletcher, Fletcher & Stevenson
Keith, B., and Co.
Thompson, H. A., and Son

CONFECTIONERY

Bage, Blyton and Co.
Craven and Son
Gibson, R.
Soden Mineral Pastilles

CORN CURES

May, Son and Thompson
Robinson, B.
Yonke's

COTTON WOOL

Haynes G. & Co. (Absorbent)
Robinson and Sons (Absorbent)
Sanger, J., and Sons

IDENTIFIERS

Jewsbury and Brown
Newbery and Sons
Sutton, O., and Co.
Thompson and Capper
Woods, W. (Areca Nut)

DISINFECTANTS

Government Sanitary Co.
National Chemical Co.
New Carbolic Sanitary Co., Ltd.
May and Baker (Bromidine)
Sanitas Co.

DOG MEDICINES

Spratts (Patent)

DRUG & SPICE**MERCHANTS**

Steinger and Co.

DRUGGISTS' SUN.

Ayrton and Saunders
Barclay and Sons
Bourne, Johnson and Latimer
Evans, Leecher and Webb
(Hawley's Counter Adjuncts)
Evans, Sons (Savars)
Idris and Co.
Lynch and Co.
Maw, S., Son and Thompson
May, Roberts and Son
Newbery, P., and Sons
Pattison, Geo.
Sanger and Sons
Schutze and Co.
Sherlock, Bros.
Soul, W. H., and Co.
Thompson, Millard and Co.
Toogood, W.
Wood, Vincent

DRUMS, CANS, &c.

Noakes and Co.

DYES

Ayrton and Saunders
Prunk, Davis and Co.

EAU DE COLOGNE

Farina, J. M. (Gegenuber)
Maria Martin (Nun)

ELECTRIC APPAR.

Darton, F., and Co.
Orme and Co.
Colthurst & Harding (Electric Light Oil)

EMBROCATION

Elliman, Sons and Co.

ENEMAS

Ingram and Son
Lynch and Co.
Maw, Son and Thompson
(Elastic Apparatus)
Sanger and Son

ENGRAVERS

Barker, W., and Son

ESSENCES, FRUIT**AND SOLUBLE**

Bratby and Hinchliffe
Burgoyne, Burdidges and Co.
Bush, W. J., and Co.
Carter, H. W., and Co.
Hay, W.
Idris and Co.
May and Baker
Oldfield, Pattison and Co.
Stevenson and Howell
Type and King
Vogt, G.
Woolley, Sons and Co.

ESSENTIAL OILS

Bush, W. J. (Lemons, &c.)
Cocking (Japan Peppermint)
Jackson, J., and Co.
May and Baker
Rocke, Tompsitt (Encalyptus)
Stallman and Filton
Stevenson and Howell
Todd, A. M.
Vogt, G.
Warrick Brothers
Wright, Layman and Umney

ETHER

Duncan, Flockhart and Co.
(Chloric)

Howards and Son
May and Baker
Robbin

White, A., and Sons

EUCALINUM

Rocke, Tompsitt and Co. (Antiseptic Poultice and Vinegar)

EXTRACT, MEAT

Brand and Co.
Evans, Sons and Co.
Liebig Co.
Liebig's Wine Co.
Viking Food and Essence Co.

EXTRACTS, FLUID

Barber, G., and Co.
Burgoyne, Burdidges
Evans, Sons & Co.
Fletcher, Fletcher & Stevenson
Heaton, Squire and Francis
Oldfield, Pattison and Co.
Potter and Clarke
Violet

FACE POWDERS

Chubb, J., and Co. (Violet)

FEEDING BOTTS.

Bourne, Johnson and Latimer
Hearn, E. A., and Co.
Kilner Bros.
Maw, Son and Thompson
May Roberts and Co.
Pocock, Keivil and Co.
Savars
Thompson, Millard
Toogood, W.

FILTERING

Crystal Filter Co.
Dunlop and Co.
Dunlop, Mitchell and Co.
Maignon (Filtre Rapide)
Mawson Swan, and Weddell
Slack & Brownlow
Sliedrecht Crbn Filt Co.

FLY PAPERS

Ford, Shapland and Co.

FOAM PRODUCERS

Bush, W. J., and Co.

FOOD (Infants & Invalids)

Allen and Hanbury
Benger's Pancreatized
Brand and Co. (Ising)
Burroughs, Wellcome (Pepton)
Craven, M. A., and Son
Evans, Sons and Co.
Gibson, R. (Manufacturer)
Hill and Son
Martindale, W. (Nitro-Glycerine Tablets)
Warrick Brothers
Lazenby, E., and Son
Motershead and Co. (Benger's Food)
Nestle, H.
Savory and Moore
Spring and Co. (Kef.)
Van Abbott (Diabetic)

FORMULE

Brooks, T.

FULLER'S EARTH

Chubb, J., and Co.

GINGER ALE

Harston and Co.
Hay, W. (Essence)
Mills, R. M.

GLYCERINE

Fink
Martindale, W. (Nitro-Glycerine Tablets)
Price's Candie Co.

GRANULAR PREP.

Bishop, A., and Sons
Bush, W., and Co.
Curtis and Co.
Evans, Sons, and Co.
Wright, Layman and Umney

GUMS

Pink (Araliac, &c.)
Prunk, Davis and Co.

GUTTAPERCHA

Duncan, Flockhart

Stevens, P. A. (White)

HEMORRHOIDS

Bayley and Co.

HAIR PREP.

Ayer, H. H. (Recamier)
Bates, F. W. (Frizzetta)
Capper, W. B. (Grindons)
Chesebrough Manf. Co.
Cubley and Preston
Kerch Hygienic Co.

HERB BEER EXTS.

Newball and Mason
Potter and Clarke

HERBALSITS

Butler, McCulloch and Co.
Newball & Mason (Ext. of Herbs)
Potter and Clarke

HOMOEOPATHIC

Epps and Co.
Aeneas and Ashwell
Leath and Ross
Thompson and Capper

HONEY

Kemp and Son

ROP ALE ESSENCE

Isy, W.

HOSPITALS

London Homoeopathic

HYPHOSPHITES

Duncan, Flockhart and Co.
Dunn and Co.
Fletcher, Fletcher & Stevenson
Type and King
Yeatman, F. J.

INK (See MARKING.)

Bawley and Draper
Duncan, Flockhart

INHALERS

Burroughs, Wellcome and Co.
Evans, Sons and Co.
Maw, S., Son and Thompson
Sprlone, The Co., Ltd.
Toogood, W.

INSECTICIDES

Sanford
Steiner and Co.

KETCHUP

Tyrer, P.

LAMPS, LIGHTS, &c.

Albo-Carbon Gas Light
Clarke, Samuel ("Fairy")

LARD

Ewen, J.

LEECHES

Fitch and Nottingham
Potter and Clarke

LIME JUICE

Felton and Sons (Specialité)
Idris and Co.
Montserrat (see Evans)

LINSEED

Idris and Co.
Kemp, W., and Sons (Crushed)
Munford, G. S.
Nell, R. J.
Stewart, W., and Co.

LINT

Liverpool Lint Co.
Maw, Son and Thompson
(Taylor's)
Newsome (Surgeons')
Robinson and Sons
Seahury and Johnson

LOZENGES

Allen and Hanbury
Blyton, Bage & Co. (Medicated)
Craven, M. A., and Son
Evans, Sons and Co.
Gibson, R. (Manufacturer)
Hill and Son
Martindale, W. (Nitro-Glycerine Tablets)
Warrick Brothers

LOOFAHS

May, Roberts and Co.
Maw, S., Son and Thompson

MACHINERY

Bracher and Co.
Brinjes and Goodwin
Burroughs, Wellcome and Co.
Carter, J. H.
Melin, C. (Capsuling)
Pinder, H.
Sherwin
Werner and Pfeiderer

MAGIC LANTRNS

Hughes, C.
Perken, Son and Rayment

MAGNESIA

Bishop, A.
Dinneford (Fluid)
Henry, T., and H. (Calcined)
Murray, Sir James (Lime)

MALT EXT., ETC

Allen and Hanbury
Burroughs, Wellcome and Co.
(Malt Extract "Kepler")
Eckell's
Heaton, Squire and Francis
Hoff, M.
Liebig's Wine Co.

MENTHOL

A 1 Menthol Depot, A. W.
Shirley, Proprietor
Banner, E. R.
Cocking and Co.
Evans, Sons and Co.
Hockin Wilson and Co.
Maw, Son and Thompson
Newbery and Son
Shirley
Todd, A. M. (Crystal Oil of Peppermint)

MARKING INKS

Barber, G., and Co. (Crimson)
Christian, J.
Maw, Son and Thompson

MEDICINE CHSTS

Burroughs, Wellcome and Co.
Day, Son and Hewitt (Veterin.)
Day and Sons

MERCURIALS

Bush, W., and Co.
Howards and Sons
May and Baker

METHYLATED**SPIRITS**

Burrough, J.
Harvey, J. & W., and Co.
Jones and Co.
Macnair, J. & D.
Phillips, G., and Co.

METHYLENE

Robbins, J., and Co.

MIXING MCHRY

Bracher and Co.
Brierley, W.
Brinjes and Goodwin
Burroughs, Wellcome and Co.
Carter, J. H.
Sherwin, G. E.
Werner and Pfeiderer

MICROSCOPES

Darton, F., and Co.
Perken, Son and Rayment

MORPHIA

Macfarlan, J. F., and Co.
Smith, T., and Co.
Wink, J. A., and Co.

MUSTARD

Banner, E. R. (Oil)
Johnson, J. H. and S. (Ess. Oil)

NIGHT LIGHTS,**FAIRY LAMPS, &c.**

Clarke, S.

OILS, PAINTS, &c.

Binghamton Oil Refining Co.
Colthurst and Harding
Duncan, Watson and Co.
(Lubricating)
Gregory, W. (Devonshire Oils)

OINTMENT BASES

Bayley's
Binghamton Oil Refining Co.
Burgess, E. (Lion Ointment)
Burroughs, Wellcome & Co.
(Lanoline)
Cheesebrough (Vaseline)
De Pass, E. A., & Co. (Petrolina)
Grindley (Petroleum Jelly)
Singleton's Eye Ointment

PAINTS [See OILS.]**PAPAIN FINKLER**

Kuhn, B.

PARALDEHYDE

Zimmermann, A. and M.

PATENT AGENTS

Horn and Son

PATENT MEDCNS.

Armbrrecht, Nelson & Co. (Coca Wine)
Atkinson (Infant Preserv)
Barclay and Sons (General)
Bayley's (Tablets, &c.)
Beck, A. N. (Beck's Hop Bitters)
Bilcham, J. and Co.
Beddler, J., and Co.
British College (Morrison's)
Burgess, E. (Lion Ointment)
Crouch, F. B. (Wafers)
Curtis and Co.
Drysdale, J. W., and Co.
Edwards and Son
Evans, Leecher (Hawley's Counter Adjuncts, Coated Pills, &c.)
Fanning's (Powders)
Hirst, Brooke, and Hirst
Holloway (Pills and Oint.)
Hop Bitters Co.
Isalor (Phosphodyne, &c.)
Lincoln (Clarke's Mix.)
Locock, Dr. (Wafers)
Lynch and Co.
May, Roberts and Co.
Newbery and Sons
Powell, T. (Balsam of Aniseed)
Ratti and Co. (Mecuphrosme)
Richer's, Dr. (Pain Expeller)
Roberts (Foreign)
Savars
Singleton's Eye Ointment
Soul, W. H., and Co.
St. Dalmas (Bronchial, &c.)
Swift Specific Co., The
Thompson, Millard and Co.

PERFUMERY,**FANCY SOAPS.**

(See EAU DE COLOGNE.)

Atkinson, J., and Co.

Ayer, H. H.

Barclay and Sons

Bayley and Co.

Biggleston, E. R.

Burroughs, Wellcome and Co.

Cheesebrough Manufactur'g Co.

Coward and Co.

De Pass & Co. (Peach Blossom)

PHARM. PREPS.

Allen and Hanbury
Barron, Squire and Co.
Benger's
Blyton, Bage, and Co.
Burgess, Willows, Francis
Burgoyne, Burdidge
Burroughs, Wellcome Various
Duncan, Floc hart
Evans, Sons and Co.
Fletcher (Lqrs. for Syrups)
Hearon, Squire and Francis
Hewlett and Sons
Hill and Son
Hooper, B., and Co.
Howards and Sons
Keith (Conc. Tinctures)
Lorimer and Co.
Martindale (Nitroglycerine)
Sellers, J.
Southall Bros.
Tynke & King
Wink, J. A., and Co.
Woolley, Sons
Wyleys (Various)

PILLS (Coated, &c.)

Allen and Hanbury (Schief-
felins)
Barron, Harveys and Co.
Becham, Thomas
Hearon, Squire and Francis
Hooper, Dr.
McKenzie and Robbins Ovoid-
capsuled)
Morrison and Co.
Newbery and Sons
Sanger, J., and Sons
Smith, F.
Southall, Bros. and Barclay
Warner, W. R. (Coated)
Wyleys and Co.

PILL MACHINES

McFerran, J. A.
Niblett, G. W.
Pindar, J. W.
Robertson, J., and Co. (Coating)

PLASTERS

Burroughs, Wellcome and Co.
Evans, Sons & Co. (Belladonna,
&c.)
Lincoln Drug Co.
Mather, W.
St. Dalmas, A. De
Sabbury and Johnson
Smith, W. F.

PODOPHYLLIN, &c.

Keith, B. and Co.
Smith, T. and H.

PORCELAIN GDS.

Maw, S., Son and Thompson
Potts, H., and Co.
Toogood (E.c. Pots, regist.)

PUMILINE

Burroughs, Wellcome and Co.
Stern, G. and G.

POLISHING

Baumgartner (La Brillantine)
Bradley, Bourdas (Albatum)
Cardigan Reviver
Chancellor and Co. (Stove)
Oakley, John, and Sons

PRINTING

Bowers Bros.
Davis, J., and Co.
Facsimile Apparatus Co.
(Cyclostyle)
Ford, Shapland and Co.
Silverlock, H.
Townsend, J. (Exeter)

QUININE SALTS

Brumleau, C. (Pelletier's
Quinine)
Howards and Sons
Zimmermann

RENNET

Benger's (Essence of)
Johnsen and Jørgensen

SACCHARINE

Allen and Hanbury
Burroughs, Wellcome and Co.

SALICINE

Macfarlan and Co.
Smith, T. and H., and Co.

SAUCES, PICKLES

Lazenby (Harvey's)
Tyrer, P.

SCHOOLS OF

**PHARMACY,
HOSPITALS, &c.**

City and Guilds of London In-
stitution
Edinburgh Classes
Liverpool School
London Homœopathic and
Medical School
Manchester College
South London School of
Pharmacy Ljip.
The School of Pharmacy
Tully, J.
Westminster College

SEA SALT

The Maldon Crystal Salt Co.

SEALING WAX

Stewart, G., and Co.

SEIDLITZ PWDRS.

Cbnbb, J., and Co.

SELTZOGENES

Evans, Sons, and Co.
Idris and Co.

Maw, Roberts and Co.

SHEEP DIP

Grindley and Co.

SHAVING

Dukes and Co. (Brushes)
Hovenden (Euxesis)
Lloyd, A. S. (Euxesis)

SHOP FITTERS

Bygrave, J. and W.
Howlett, S.
Maw, Son and Thompson
Natali, E. (Show Cases)

SOAP (SOFT, &c.)

Chiswick Soap Co.
De Pass and Co.
Pears' Soap
Whitaker and Grossmith

SPECTACLES

Botwright and Grey
Darton, F., and Co.
Raphael and Co.

SPICE

Nell, R. J.

SPIRIT

Boord and Son
Burrough (Pure & Methyl.)
Harvey, J. W., and Co.
Jones and Mason (Methyl.)
Macnair, J. & D.
Phillips and Co.

SPONGE

Burroughs, Wellcome and Co.
Gresswell Bros.
Gresswell, R., and Co.
Evans, Sons and Co.
Maw, Son and Thompson
(Sponge Bags)
Peterson, M.
Schutze and Co.
Sherlock Bros. (Sponge Bags)

STAMPS (RUBBER)

Pollard, A. W.

STOPPERS

Anstn and Co. (Sprinklers)
Barnett & Foster (The Eclipse)
Brooks, Peel (Sprinklers)
Lazenby, E., and Son (Barrett's
Patent)

SURGICAL

Ayrton and Saunders
Bailey, W. H., and Son
De Pass and Co.
Haywood, J. H.
Ingram and Son
Liverpool Patent Lint Co.
Marks, A. A. (Artificial Lungs)
Maw, Son and Thompson
Newcome, C.
Robinson and Sons
Schutze and Co.
Stenhouse and Travis
Thompson, Millard and Co.
Woolley, Sons and Co.
Wood, Vincent

STARCH

Critchley (Gloss)

STOVES

Clarke, S., & Co. (Gas Heating)

STROPHANTHUS

Burroughs, Wellcome and Co.

SUGAR

Gibson, R.

SYPHONS

Barnett and Foster
Durafort
Idris and Co.

SYRINGES

Evans, Sons, and Co. (Ear)
De Pass and Co.

SYRUPS

Fletcher, Fletcher (Liquors)
Idris and Co.

TEA

Cave, Johnson and Co.
Gt. Tower St. Tea Co.
Heseldine, Wm., and Son
Hobbs Antitannic Infuser Co.
(Tea Infuser)
Kearley and Tonge
Pearse and Wheatley
Sunnier and Co.
Walker and Dairympe

TEREBENE

Burroughs, Wellcome and Co.
Hearon, Squire and Co.

THERMOMETERS

Darton, F., and Co.
Goodall, H. A., and Co.
Perken, Son and Rayment
Schutze, F., & Co.

TIN CANISTERS

Noakes, B., and Co.

TOILET REQUISITS

Downing, J. S. (Paper and Fix-
tures)
Rocke, Tompsett and Co.
(Toilet Vinegar)

TOOTH PASTE

Jewsbury and Brown
Sutton, O., and Co. (Block)
Woods, M. (Arcca)

TRADE MARKS

Horn and Son

TRUSSES

Colwell, H. M.
Evans, Sons, and Co.
Haywood, J. H.
Lynch and Co.
Maw, Son and Thompson
Schutze and Co.

TYPE-WRITING

Pollard, A. W.
The Universal "Simplex"

URETHANE

Howards, Sons and Co.

VARNISH

Colthurst and Harding
Fronk, Davis and Co.

VACCINE LYMPH

Association for the Supply
of the Pure

VALUERS AND**TRANSF. AGENTS**

Orridge and Co.
Tomlinson and Sons

VERMIN KILLERS

Battle, J. R.
Sanford and Son
Steiner and Co.

VETERINARY

Corner, R. (Devonshire Oils)
Day and Son
Day, Son and Hewitt
Gregory, W.
James, Lieut.
James, R. J. (Bilster)
Spratts (Dogs)

VINEGAR

Rethermel (Making)

WAFERS

Crouch, F. B. (Damiana)
Loock, Dr. (Pulmonic)

WHOLE & EXPT.**DRUGGISTS**

Allen and Hanbury
Barron, Squire and Co.
Burgess, Willows
Burgoyne, Burdidge
Bush, W., Son and Co.
Butler, McCulloch and Co.
Evans, Lecher and Webb
Evans, Sons and Co.
Evans, Sons and Mason
Harker, Stag and Morgan
Hearon, Squire and Francis
Hewlett and Son
Hill and Son
Oldfield, Pattison and Co.
Pearson, C. F., and
(Foreign)
Potter and Clarke (American
&c.)
Southall Bros. and Barclay
Sumner, R., and Co.
Thompson, Millard and Co.
Thompson, H. A., and Son
Woolley, Jas., Sons and Co.
Wright, Layman and Umney
Wyleys and Co.

WINES AND SPTS

Boord and Son
Coleman and Co.
Durrant, G. (Orange)
Idris and Co.
Ingram and Royle
Liebig's Wine Co.
Phillips, G., and Co. (Pure
Spirits of Wine)
Robinson, B. (Orange)

USE LIEBIG COMPANY'S EXTRACT OF MEAT.

*** Ask for the COMPANY'S Extract, and see
that it bears Justus von Liebig's SIGNATURE
IN BLUE INK across the Label.

HIGHEST AWARD

(FIRST ORDER OF MERIT, WITH BRONZE MEDAL),

ADELAIDE, 1887,

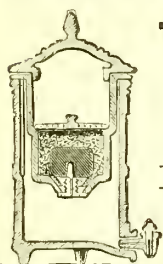
AWARDED TO

HAYWARD TYLER & CO., LONDON,

FOR

AËRATED WATER MACHINERY.**DOULTON & CO., LAMBETH, LONDON, S.E.**

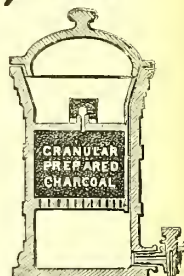
MANUFACTURERS OF EVERY DESCRIPTION OF

WATER FILTERS.NEW PATENT
Manganous Carbon FILTERS.
Boudoir and Table FILTERS.
Pocket and Syphon FILTERS.House Supply or Cistern FILTERS.
Patent Granular Charcoal FILTERS.
Refrigerator FILTERS.**MAIN SERVICE FILTERS**

FOR INTERMITTENT OR CONSTANT SUPPLY.

See Reports, Analyses, &c. Detailed Lists on application.

To be obtained of all Dealers.

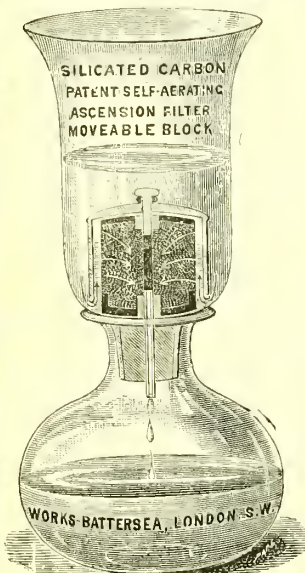
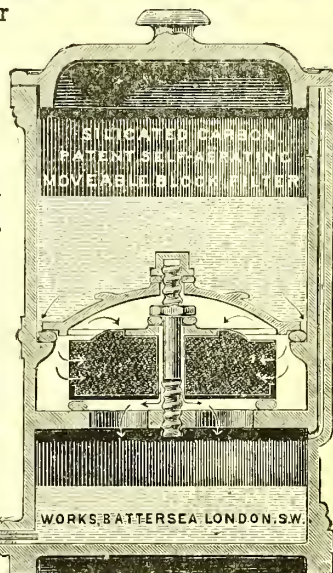
**DOULTON & CO., LAMBETH, LONDON, S.E.**

DEPOTS:—100 Soho Street, LIVERPOOL; Granville Wharf, BIRMINGHAM; and 6 Rue de Paradis, PARIS.

AERATED AND FILTERED WATER.

SILICATED CARBON PATENT SELF-AERATING MOVABLE BLOCK FILTERS.

LIBERAL DISCOUNT TO THE TRADE.

Each time that the Filter is filled the air under the Aerator Cover is forced in the direction shown by the arrows through the Silicated Carbon Block, so that the Water is & Filtered simultaneously, rendering it **BRIGHT, &****Aerated
taneously,
PURE,
PALATABLE.**The Silicated Carbon Block can be instantly removed, leaving the whole of the Filter **OPEN** for inspection and cleansing.

LIBERAL DISCOUNT TO THE TRADE.

Glass Table Filters.

Domestic Filters.

SILICATED CARBON FILTER CO. WORKS: BATTERSEA, LONDON.

TO THE
CHEMISTS & DRUGGISTS
OF
GREAT BRITAIN.

TELEGRAPHIC ADDRESS:

COLEMAN,

GEORGE'S, NORWICH.

St. George's, Middle St.,

NORWICH,

December, 1887.

The Excise Authorities having created a difficulty as to the sale of Medicated Wine containing a certain percentage of alcohol, we obtained in January last, from the Inland Revenue Authorities, permission to sell our Liebig's Extract of Meat and Malt Wine, **WITH QUININE**, without a Wine Licence, and many Chemists not holding a Wine Licence have sold considerable quantities. In order further to meet the requirements of the trade, we have introduced a Liebig's Extract of Meat and Malt Wine, **NON-Alcoholic**, made from the juice of the Grape, Liebig's Extract of Meat, and Extract of Malt. This also can be **SOLD WITHOUT A WINE LICENCE**. Your orders will oblige either direct or through the Wholesale Houses.

Yours obediently,

COLEMAN & CO., LIMITED.

N.B.—The Wine is sold in Bottles, 2/9 and 4/6 each.

Trade prices on application.

P.S.—We are willing to pay the entire cost of a Retail Licence (the holder of which can sell any kind of Wines) if an assorted order of 12 dozen is sent us of any of our preparations. List on application. Our Liebig's Extract of Meat and Malt Wine **WITHOUT QUININE** still commands a very large sale.

SOLE MANUFACTURERS—

COLEMAN & CO., LIMITED,

ST. GEORGE'S, NORWICH,

AND 3 NEW LONDON STREET, LONDON, E.C.

12½ gals. for £1, Cask free.
SPECIAL LINES FOR CASH BUYERS.

TYRER'S
WORCESTER SAUCE,
YORKSHIRE SAUCE,
"BOROUGH" KETCHUP.
BEST VALUE THAT MONEY CAN PURCHASE.

Prices and Samples sent free of all cost by
PETER TYRER, The "Borough" Ketchup & Sauce Maker,
70 LONG LANE, LONDON, S.E.

DE MIEL'S PERFECT HEALTH BISCUITS.

CHEMICAL LABORATORY.

54 Holborn Viaduct, E.C., London, Jan. 7, 1887.

Messrs. THE INTERNATIONAL PATENTS ASSOCIATION.

Dear Sirs,—Having submitted the sample of DE MIEL'S BISCUITS lately received from you to a careful chemical analysis, we are enabled to report upon them as follows:—

These Biscuits have been found to contain considerable proportions of nitrogenous matter and of carbo-hydrates; they are also especially rich in salts, which include a large amount of combined phosphoric acid. The flesh-producing, heat-giving and bone-forming constituents of food are thus all represented in these Biscuits.

A satisfactory feature is absence of excess of moisture, the baking having evidently been conducted with care.

The Biscuits possessed an agreeable flavour; and they can be pronounced to be well made and of good quality.—We remain, faithfully yours,

ARTHUR HILL HASSALL, M.D., Lond.,

Author of "Food: Its Adulterations and the Methods for their Detection."

EDWY GODWIN CLAYTON, F.I.C., F.C.S.

A Liberal Discount to the Trade.

Circulars and Particulars on application.

The **INTERNATIONAL PATENTS ASSOCIATION,**
15 NICHOLAS LANE, LONDON, E.C.,
MANUFACTURING CHEMISTS AND SUNDRIESMEN.

Edwards' BY ROYAL
LETTERS PATENT.
HIGHEST AWARDS: **Desiccated Soup.**

International Health Exhibition, LONDON, 1884.

International Exhibition, LIVERPOOL, 1885.

Consists of the finest Vegetables and Extract of Beef in a dry state.

The Manufacturers beg to direct the attention of the Trade to the above article, now commanding a ready and remunerative sale. It is put up in a neat and attractive form, in 1-lb., ½-lb., and ¼-lb. tins, to sell at 1s. 3d., 6d., and 4d.; also in packets containing 1 oz. at 1d. These are packed in cases of 30 1-lb., 45 ½-lb., or 72 ¼-lb. tins; the 1d. packets in gross and half-gross boxes, in cases of 12 gross; carriage, tins, and cases free. A liberal supply of Show Cards, Glaciers, and printed matter, consisting of Circulars, Medical Testimonials, Press Opinions, and Counter Bills bearing name and address.

Sample, with Terms, free on receipt of Business Card.

FREDK. KING & CO., LIM.
26 WARING STREET, BELFAST, and
3 and 6 CAMOMILE ST., E.C.

DRESSING COMBS.

For quotations of all descriptions see Druggists' Sundries List of undersigned.

See Advertisement, page 5.

EVANS, SONS & CO.
LIVERPOOL.

LONDON:

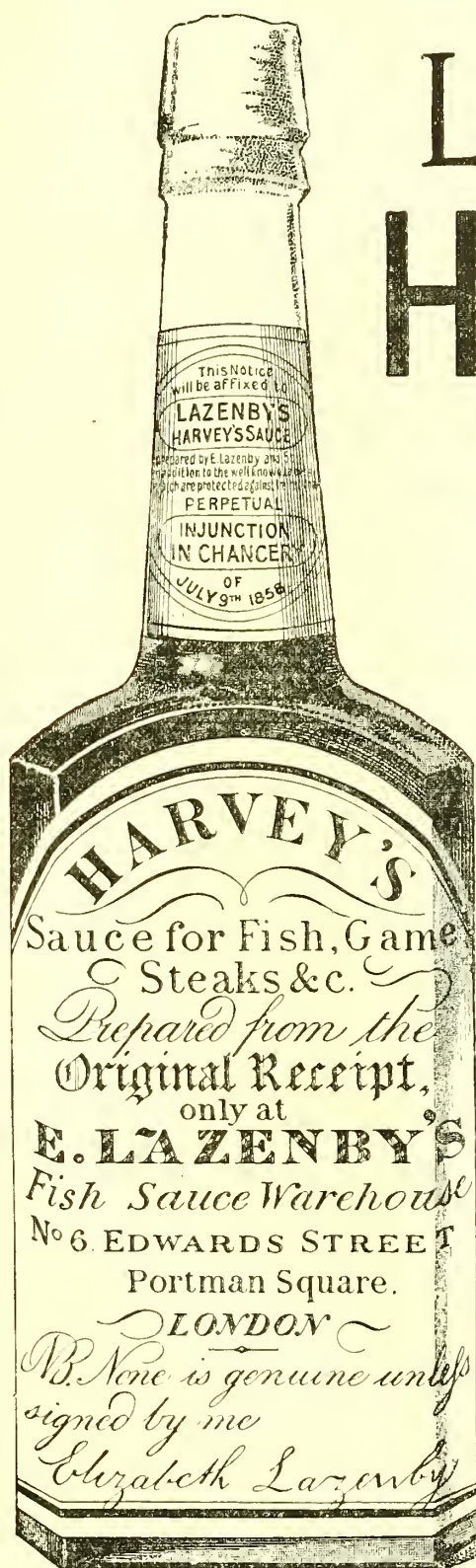
EVANS, LESCHER & WEBB,

60 Bartholomew Close.

CANADA:

EVANS, SONS & MASON, LIM.

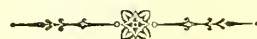
Montreal, Toronto, and Victoria,
British Columbia.



LAZENBY'S HARVEY'S SAUCE

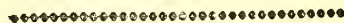
FOR
FISH, GAME, STEAKS,
&c.

In use for now nearly
a century.

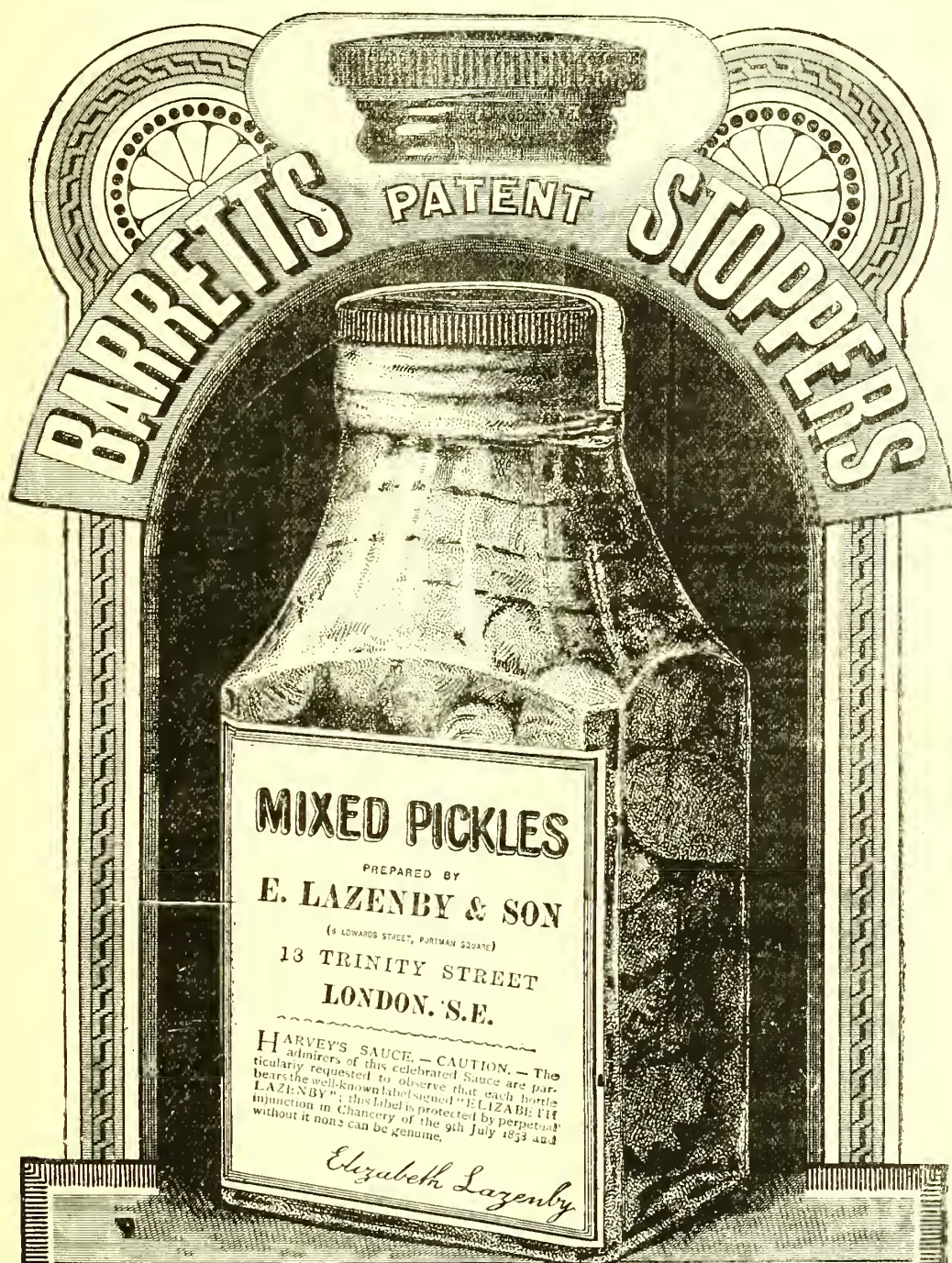


CAUTION.

Each bottle of the celebrated Sauce prepared from the ORIGINAL RECIPE bears the well-known Label signed "Elizabeth Lazenby," without which none can be genuine.



E. LAZENBY & SON,
18 Trinity Street,
LONDON. S.E.



AGENTS FOR THE UNITED KINGDOM
E. LAZENBY & SON, LONDON.

EXCHANGE COLUMN.

This section of "The Chemist and Druggist" must be closed for press by Thursday noon of each week. Remittances payable to EDWARD HALSE.

FOR DISPOSAL.

Drugs and Chemicals.

Surplus pot. iodid. ang.; guaranteed pure and white; 9s. 6d. lb. carriage paid, on receipt of remittance. Lane, Chemist, Holloway Road, N.

14 lb. quicksilver, 2s. 1b.; 1 lb. iodoform, 14s.; 4 lb. essence lemon, super., 5s. 6d. lb.; 2 lb. essence bergamot, 5s. 6d. lb.; $\frac{1}{2}$ lb. Aleppo scammony, genuine, 16s. lb. J. C. Lingdale, Skelton, R.S.O.

Hop resin, a very powerfully appetising and soothing tonic; would be an invaluable appetising adjunct in horse balls, pills, and medicated lozenges; being a by-product 6d. per lb. only, 7lbs. 3s. Hay, Manufacturing Chemist, Hull.

Surplus.—Quinine, Howard's, 2s., sample ounce posted, 2s. 3d.; peppermint oil, English, makes clear essence, 15s., sample ounce, 1s. 3d.; ol. santal. ang., 4 ozs., 5s. 6d.; paraffinum molle (vaseline), 7-lb. tin, 3s. 9d.; paraffinum liquidum, bright, good solvent camphor, carbolic, suitable hair-oil, pomades, sample 2 gallons, 5s.; pomade bottles, nickelled screw caps, 2-oz. 14s., 3-oz. 16s., 4-oz. 18s.; glycerine jelly, 2-oz. bottles (as above), crystal clear, red, or assorted, rose perfumed, 3s. doz.; 1-oz. ditto, 2s. 3d.; menthol cones, 30-gr., boxwood screw, 2s. 6d.; ditto nickel-capped bottles, 2s. doz.; moulds, as Maw's 6 holes, suppository, 4s.; pessary, 10s.; bougie, 12, 12s. 6d.; syringes, 3ss. 1s. 6d., 3j. 2s. 6d.; samples, retailing 5s. 6d., post free 2s. 6d. Saunders, 6 Rochester Square, N.W.

Proprietary Articles.

Patent medicines at half retail, a splendid mahogany case. Send for list and particulars, Kendall, Blyth.

Apparatus.

Apparatus, quantity of, now useless to owner; graduated glass; crucibles, platinum, cost 33s. for 25s., &c.; Ertling balance and weights, cost 12l. 10s., 6l. or offers. Barton, 13 Charlotte Street, Bedford Square.

Literature.

Wills' "Materia Medica Cabinet," cash or exchange. "Medicus," 25 Sheaf Street, Daventry.

"Urinary Deposits," Bird's, 2s. 6d.; Muspratt's "Chemistry," parts, 10s.; "Guide to Soap Making and other Washing Compounds," 2s. 6d., 34 Finlay Street, Sheffield.

Last editions. — "Pharmacopœia," Attfield, Squire, and a lot of pharmaceutical textbooks, now no use to owner, all recent. Barton, 13 Charlotte Street, Bedford Square.

Wills' "Elements of Pharmacy" and "Vegetable Materia Medica," with map, both new; will take cash, or 1885 B.P., or any of Muter's books, in good condition, in exchange. Dodge, Winchester.

Shop Fittings.

6-ft. bent plate-glass case, as Maw's fig. A 18 5l. 10s.; dispensing screens, 4 ft. 6 long, 60s.; 5 ft. long, 65s.; a quantity of counter cases plate-glass, bent and flat, all sizes, from 2 ft. to 9 ft. long, to be sold cheap; wall case, 4 ft. long, as Maw's fig. A 88, but instead of bent cases in between top and bottom part there are sloping cases, 7l.; sponge cases, as Maw's fig. 43, 95s.; ditto ditto, as fig. 41, 60s. E. Natali, 207 Old Street, E.C.

Eight chemist's window carboys; complete set labelled bottles, jars, sundry stock, &c.; a rare bargain; shop must be cleared; refitting for another trade. Apply between 6 and 7, W. S., 4 Peupoll Road, Graham Road, Hackney.

Second-hand fittings—6 wall cases, 4 counter cases, 2 dispensing screens, handsome ditto, elliptical on plan, 2 desks, 3 counters, 4 nests drug drawers, 2 ditto, glass labels, 2 window enclosures, various iron work and gas fittings, 3 specie jars, 5 31-in. scroll labels and plinths, our own supply few years, 11 carboys and stands, 24 green carboys, 192 rounds, yellow paper labels, and 60 odds with contents, 2 gross rounds, 72 pots, 2 15-in. marble mortars, fascia; remittances with orders. Hawke & Son, Wild Court, Great Wild Street, London.

Entire fittings of a chemist's shop, part second-hand, for 35l.; also 24 best pink shop jars, labelled, 4s. 6d. each; 15 doz. new shop rounds and jars, gold labelled, 8l. 10s.; 12 ft. range pine drawers, gold labelled, 6l. 10s.; 12 ft. range mahogany ditto, glass labelled, 9l. 10s.; desk and glass case, 55s.; dispensing screen, 6 feet long, with mirror centre and marble slab, very handsome, 6l.; plate-glass counter-case, 36 x 18, 1l. 15s.; dispensing case, 4 feet long, 3l. 15s.; 4 4-gallon carboys, 10s. each; 4 2-gallon ditto, 6s. each; 6 6-gallon ditto, 14s. each; 12 3-lb. blue jars, labelled, 24s.; 12 2-lb. ditto, 18s.; 200 secondhand mahogany drawers, cheap. R. Tomlinson & Sons, Bond Street, Constitution Hill, Birmingham.

50 doz. shop rounds, gold labelled, all sizes, 7s. 6d. doz.; 14-ft. wall fixture, drawers, lockers, shelving cupboards, and cornice, 9l.; 12-ft. ditto ditto, 8l.; 16-ft. mahogany wall case, 9 ft. high, fitted with movable shelves, 20l.; 12-ft. ditto ditto, 16l.; 6 ft. 6 flat plate-glass case, with shelves at back, as Maw's fig. A 18, 5l.; 3-ft. bent ditto, as A 17, 50s.; dispensing screens, with glass case on each side and silvered plate-glass centre, marble slab in front, tablets on cases, and shelves at back for dispensing bottles, from 6l. 10s.; 5-ft. ditto ditto, as A 55, 95s.; 6-ft. ditto, 5l. 10s.; soda-water stand, as A 59, 45s.; several pair specie jars, royal arms, on stands, equal to new, from 24 to 40 in. high, 4l. to 5l. 10s. pair; 6 8-gallon pear-shape carboys, cut stoppers, 20s. each; a number of smaller sizes; 21 4-lb. blue ointment jars, gold labelled, 40s. the lot; done-covered pink ointment jars, gold labelled, any name, 3s. 9d. each. E. Natali, 207 Old Street, E.C.

Formulæ.

Tenth year's advertisement, 1,500 clients, hundreds testimonials, strictly confidential; Brook's recipes are best; preparations all in commerce; try them.—"Influenza Mixture," acts like magic, pleasant and safe; "Glycerine Cream" (like Beetham's), rapidly cures chapped hands, frost-bites, &c., rendering skin like velvet; "Hop Tonic," better than any other, can be made instantly, costs 1s. lb.; "Canadian Cone," certain cure for chilblains, sweet and cleanly; "Bronchelixir," rapidly gives relief in bronchitis and chest affections, wonderful remedy; "Embrocacio Alb.," inseparable white oils, fac-simile of Eiliman's, certain to please, easily made; "The Jubilee Sance," universally liked, most luscious, renders cold meat a luxury, differs from any other, costs under 6d. a pint; recipes 1s. 1d. each, 3 for 2s. 6d. Special offer.—Cut this out and above will be sent (as sample) for 5s.; list free. Tom Brooks, Chemist, Louth, Lincs.

Reliable recipes, 6d. each; full set of 130, neatly copied in book, 7s. 6d.; send for list. "Chemist," Edwards, Wye, Kent.

Gonorrhœa, gleet, syphilis, bubo, secondaries, set of 20 practical recipes with directions, 3s. 6d.; disinfectant perfume for the handkerchief and sprinkling on bedclothes, costs 6d. per pound, 2s. 6d.; rat exterminator, not poisonous, 2s. 6d.; method for preparing powder ointments, with appliances, 1s. 6d. Johnson, 64 Furness Hill, Sheffield.

Miscellaneous.

Offers wanted for last year's *Chemist and Druggist*, also *Journal*. Rayson, Nottingham.

7 lbs. best Pontefract cakes, carriage paid, for 6s. Young, Pontefract.

Microscope objects, 6d. each, 5s. dozen, large variety; list; approval. Henry Ebbage, Framlingham.

About 1 gross spectacles and eye-glasses, most saleable kinds, at one half invoice price. Barton, 13 Charlotte Street, Bedford Square.

Offers wanted for Bracher's mixer, new pattern, to mix 40 oz.; also for 25-gallon barrel churn, Waide's; both nearly new. Adams, Mansfield.

Carriage paid, 3s. 10d., Southall's "Two Century" benzoin, complete case; carriage paid, 37s. 6d., Judson's 48s. automatic dye show case, 168 sixpenny bottles, or offers. Brisley, Bexhill, Sussex.

Keene & Ashwell's 2l. 15s. agent's case, containing 99 1s. tinctures and pilules, all fresh; 18-inch marble mortar from Maw's, and 5-inch long-handled pestle, cost 42s.; five-grain pill-machine, with marble slab, cost 25s. Hornby, Richmond, Surrey.

Medical induction coil, with constant current battery and electric light combined, switches, rheoplons, and commutator, 1 charge will last 12 months; quite new; price 10l. 10s., cost 15l. 15s. W. Dee & Co., Chemists and Electricians, 239 Hammer-smith Road, W.

"Medical Hall" fascia, gold ground, richly embossed glass; this is an exceptional opportunity for any medical hall with a frontage of about 12 or 18 feet; it will be sold a bargain to an immediate purchaser, or would exchange on a side wall case, shop rounds, or counter. What offers for 7 of Maw's tooth forceps, 7 scaling and stopping instruments, 2 nickel-plated forceps; 1 Weiss' safety forceps, and a box of old teeth. Address, Clifton, 60 Queen Street, Ramsgate.

WANTED.

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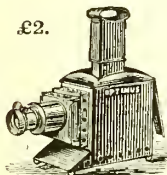
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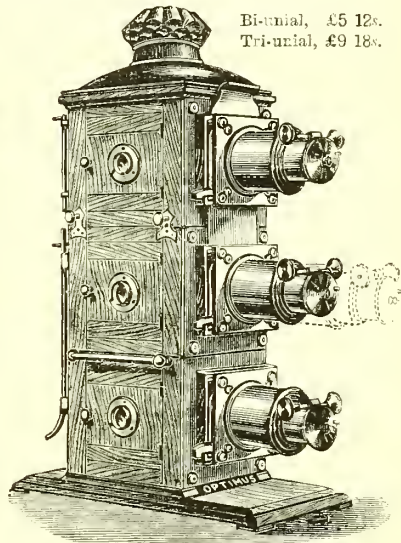
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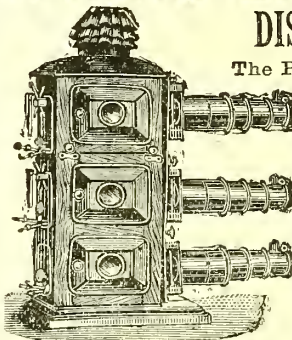
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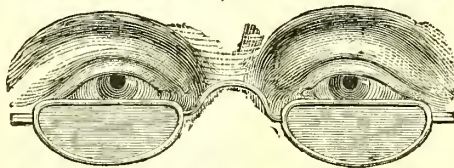
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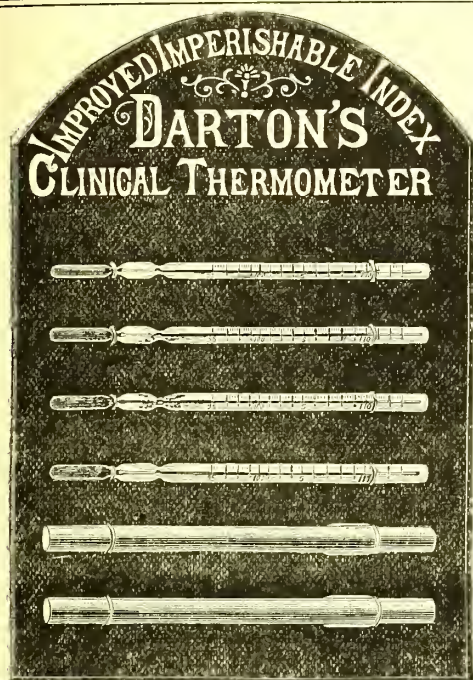
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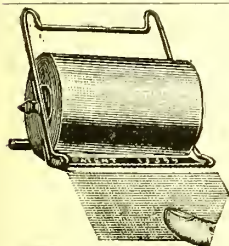
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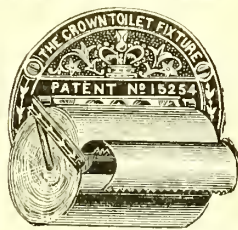
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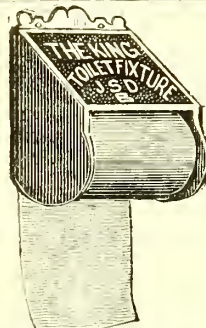
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The Advances of '87.

ANNUAL THERAPEUTIC RETROSPECT.

THE therapeutic advances of the year which ends to-day consist rather in the discovery of a wider sphere of usefulness for, and improved modes of manufacture and administration of, the drugs already known than in the introduction of many new ones of value.

Perhaps Saccharin, as the most remarkable of all the products of the coal-tar industry, has excited the greatest wonder and interest of all the therapeutic innovations of the year. A rich sweetening agent, which is neither food nor poison, and so in a full sense a perfect substitute for carbo-hydrates, is certainly a marvel. Adding to the evidence already given, Stadelmaun found that Saccharin is as well borne by invalids as those in health. One patient took of it daily for a month from a drachm to a drachm and a half, in fifteen-grain doses, without manifesting the slightest ill-effects. The Saccharin Tabloids are unadulterated with milk-sugar, mannite, or gluten, are perfectly soluble, and made of the pure and original product. One of them compensates for a lump of sugar. We also supply Saccharin in powder.

To bring within the reach of all with pulmonary troubles the benefits and even luxuries hitherto possible only to those who could leave home and visit the Pineries, or hydropathic establishments where pine products are used, has been the office of the introduction of the rare and exquisite essence of the needles of the *Pinus*, *Pumilio*, a pine which grows on the snowy heights of the Alps. The superior antiseptic and delicate fragrant qualities of this essence (Pinol), and its superlative medicinal properties, have long been of practical use on the Continent, where pine baths, and the pine treatment generally, are very popular. The new Hydropathic Institution, lately opened at Farnborough, in which Pinol is used, marks a growing appreciation of the value of pine preparations in pulmonary, renal, rheumatic, gouty, and neuralgic troubles. It is now possible for one to realise the full benefit of pinol preparations at home, and we shall be pleased to supply a circular on this subject post free, upon application.

Contrary to the prognostications of some, that antipyrin was gradually dying out, its scope of usefulness has been increasing, and of late the medical journals have contained many reports of its favourable action in dysmenorrhœa, neuralgia, and megrim. It has been administered hypodermically in from four to eight grain doses, by German See, Fraenkel, Hirsch, &c., with admirable results. The Antipyrin Tabloids are freely soluble, devoid of all admixture, and perfectly adapted in every way for hypodermic use, as well as for administration by the mouth. They are much preferred to antifebrin.

Lanoline (Liebreich) has been improved this last year, so that it is now whiter, purer, less adhesive than ever, and devoid of odour. Gottstein's experiments show its great advantages over all glycerine fats, for antiseptic and surgical dressing and for unguents in skin affections, inasmuch as it cannot be traversed by germs, while other fats can. Its miscibility with water renders it now possible to prescribe liquid preparations in the form of ointments. All this, together with its homogeneity, freedom from spicules, fatty acids, &c., and the fact that it is bland and soothing, and does not run like ordinary ointments, places Lanoline alone as a perfect unguent basis.

From the detailed reports published on the Continent, as well as from the letters we ourselves receive from medical men, the consensus of opinion among physicians as to *Strophanthus* is that in many cases where digitalis is as useless as water, the arrow-poison is all that one could expect. Naturally, it has never been recommended as a "cure all" for cardiac disease, but, despite comparisons made between it and combinations of digitalis with other drugs, it has certainly so far held its own among the heart tonics. In a prominent London dispensary the drug was abandoned and denounced; we obtained from the dispenser and analysed a specimen of the preparation used, and it was absolutely abominable. Our own preparations were given trial, and continue in use there now. *Strophanthus* can of course be given simultaneously with strychnine, diuretics, chalybeates, &c. Our Tabloids contain each 2 minims of the tincture (1 in 20), and are uniform, soluble, and reliable.

The difference in the results obtained with *Cascara Sagrada* has without a doubt been more largely due to the varying and uncertain character of the preparations than to any idiosyncrasies of the patients. Recently a trial was made in fifty cases of chronic constipation, wherein the agent removed the trouble in forty-four. Moreover, it was found desirable to diminish, rather than increase, the dose the longer the drug was given. *Cascara* is considered to be a very natural evacuant, somewhat analogous in action, perhaps, to rhubarb, though a moderate dose of it does not gripe.

The demand for Pure Terebene (Burroughs) revived with the oncome of the fall and wintery weather, and for "winter cough" it is, so far as we can judge, being quite as largely employed in the Burroughs' Chloride of Ammonium Inhaler and Atomizers as it is for internal administration. M. Betrim has recently recommended it in epithelioma of the uterus. He finds that by syringing the vagina well, and applying Terebene on a pledget of cotton, the discharge, odour, and growth of the vegetations are greatly lessened.

Continued on next page.

BURROUGHS, WELLCOME & CO., Manufacturing Chemists, Snow Hill Buildings, LONDON, E.C.

THE ADVANCES OF '87.

(Continued from preceding page.)

The serviceability of hypodermic injections of the alkaloids in critical and special cases has been recognised during the past year more than ever before. By this method an almost immediate action of a drug is obtained, and the amount in operation is accurately known, if the alkaloid be pure and the solution of it freshly prepared. Too much stress cannot be laid upon the point of the vital need of preparing alkaloidal solutions fresh for each time of using, for these potent principles are as extremely unstable as they are active. "I always keep my alkaloids," rejoins one, "in solution;" and a case of solutions alive with microscopic forms of life, and of various colours from the changes already undergone, is forthwith exhibited to substantiate the statement. In the form of Compressed "Tabloids," in glass tubes coloured when necessary to prevent the actinic effect of the light, alkaloids and active principles are supplied in the most stable and soluble condition possible. We prepare no alkaloids in "solutions" or with "animal admixture."

There are probably very few medical men in active practice who do not have occasion to prescribe pancreatic and peptic ferments—some more, some less. However much physicians may differ as to the utility of these, there can be but one opinion of the results obtained with the Fairchild digestive products, Zymine, and some of which have been published. The Zymine Peptonising Powders hold the preference of the profession for three reasons—

1. Being dry, non-hygroscopic, and free from preservatives (which, as Sir William Roberts says, have a pronounced taste impossible to get rid of), they do not, like ferment solutions, spoil and smell.
2. They require no complicated peptonising apparatus, thermometers, etc., nor even the addition of soda. One powder digests a pint of milk in a few minutes, and part of a powder part of a pint.
3. By following the directions, milk prepared with these powders is not vapid, frothy, and bitter, but as acceptable to an infant as mothers' milk.

For some time, Pepsins have been more or less under a cloud, because they are weak and usually not given with an acid, which is indispensable to the activity of the peptic ferment. It is assuredly a fact deserving of attention that the standard pepsin of the B.P. is more than twenty times too weak. Surely, the best is the cheapest. A grain of Pepsin in Scales (Fairchild) will digest 1,000 grains of egg-albumin.

A great change is coming over the field of dietetics in connection with the administration of cod-liver oil. Because of certain theories about the relaxation of the pylorus twenty minutes after eating, the custom took root of giving the oil a half-hour after meals. More—to help the stomach keep the oil down, this was "doctored up." Inductive reasoning teaches that the proper time to take oil is at meal times, and with other food. When we accordingly prepared cod-liver oil in the form of a solution with another food, viz., Kepler Extract of Malt, we encountered some trifling opposition, but the profession were quick to see the common-sense principle involved, and our opponents have metamorphosed into "imitators," so that soapy emulsions, heavy with essential oils, are fast becoming things of the past. Physicians should take good care not to prescribe merely "Malt and Oil," for this is indefinite, but kindly and carefully specify "Kepler Solution," when cod-liver oil is wanted in solution.

Finally, the key-note of the spirit of the times was struck in his paper before the last Brit. Pharm. Conference by Dr. Leech, Professor of Mat. Med. in Owens College. The following extracts are made from the paper:—

"Scientific pharmacists have invented better or at least more convenient preparations than those in the Pharmacopœia; they have invented, too, pleasanter forms for administration . . . The new compounds [among which Tabloids were cited] are welcomed partly because of their convenience, partly because their uniformity of composition is, to a certain extent, guaranteed by the wholesale producer . . . Their increasing variety and pleasantness, the excellence of the combinations presented for use, and the fact that the labour of the practitioner is much lessened by their employment will doubtless tend to reduce still further the actual compounding of drugs by medical men."

"It is felt by the members of our profession," said Prof. Leech, "that many of the conflicting results recorded by therapeutics, many of the failures met with when successes are expected, are connected with difference in strength in the drug employed. The want of reliance on the uniformity of our present official preparations is leading medical men to employ the preparations of those large houses in America and Germany, as well as in England, who guarantee their compounds of a definite strength."

It is obvious that greater uniformity and accuracy are secured where medicines are prepared in very large quantities, with the aid of elaborate apparatus, by chemists who devote themselves to special branches of pharmacy, than would otherwise be possible. We bend our every effort to manufacture the purest drugs in the most eligible form, and criticisms and suggestions are always welcome.

To Chemists who stock the above products we shall be happy to supply 4-page leaflets, containing clinical reports and particulars of interest to the medical profession. These circulars will bear the Chemist's name and address only, and the same circulars will be supplied to only one Chemist in any vicinity.

Medical men always find such pharmaceutical leaflets, suggestions, &c., serviceable for reference, and their distribution will bring customers to those who are willing to take the trouble of sending them out.

In writing for circulars, please state how many will be required, and what articles they should refer to. For Prices, see CHEMISTS' AND DRUGGISTS' DIARY, 1888, pages 116 to 134.

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As the Advertisement has not arrived up to time of going to press, this will notify them that they must pay for the space "all the same."

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CAUTION.

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Messrs. J. & E. ATKINSON desire to draw particular attention to their new steel-engraved shield-shape Label, printed in two colours, blue and yellow, which they have introduced for the better protection of their customers against fraud. This new Label is now *exclusively* employed for all articles, in conjunction with the usual "Trade Mark"—a "White Rose" on a "Golden Lyre"—printed in seven colours. Messrs. J. & E. ATKINSON continue to manufacture their articles of *one and of the very best quality only*. Any goods bearing their name, but not having affixed to them the new Label as well as the "Trade Mark," should be rejected as fraudulent imitations.

 Messrs. J. & E. ATKINSON further warn their customers that their **SOLE ADDRESS**, which appears in full on their "Trade Mark" and new Label, is **24 OLD BOND STREET, LONDON**, and that they are not in any manner related to or connected with any other firm carrying on business under the same or similar name.

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PUBLISHER'S NOTICE.

WE are now preparing our special January issue, which will be dated for January 23, and will be sent to the best selection of English-reading chemists and druggists throughout the world. We can circulate stitched up with that issue the private prospectuses and price currents of firms connected with the trade, and shall be glad to quote prices. The issue is of special importance to all advertisers, and announcements appearing in it are very likely to bear abundant fruit now that trade is looking up.

POISONING CASES.—At Leeds, on Tuesday, an inquest was held on the body of a baby, whose mother had given it half a teaspoonful of a preparation containing laudanum. The dose contained one or two drops of the narcotic. The baby died about twelve hours afterwards. The mixture had been made by the mother herself, and in summing up the coroner said that the case showed how careful people ought to be in making up their own mixtures without medical advice. Verdict: "Death by misadventure."—Last week Robert Broom, a coal agent, residing in Broxton, who had lately given way to drink, procured some vermin-killer and laudanum, which he made a draught of, dying from its effects.—Sarah Seale, wife of a Tamworth shoemaker, attempted to poison herself on Saturday by drinking the greater part of two-pennyworth of laudanum.—An inquest was held at Nottingham on December 6, by Mr. A. Browne, regarding the death of Wm. Brown (58), an army pensioner. Herbert Brown, assistant to Mr. Widdowson, chemist, deposed to selling five-pennyworth of laudanum to the deceased on the previous morning. He knew the deceased, who said the laudanum was for a sprain. Deceased afterwards swallowed the narcotic. Mrs. Brown stated in evidence that her husband had lately been despondent, and had threatened to do away with himself. A verdict of suicide was therefore returned.

The Chemist and Druggist of Australasia.

DECEMBER 1887.

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New South Wales.—Pharmacy Board—Pharmaceutical Society—The Incorporation Bill (Special Report on the Debate on the Second Reading).

New Zealand.—Pharmacy Bill—General News—Correspondence from Dunedin.

Queensland.—Pharmacy Board—Pharmaceutical Society's Council Meeting (Official Report)—Pharmaceutical News from Special Correspondent.

South Australia.—Official Report of the Council Meeting of the Pharmaceutical Society—Proposed Pharmacy Board, or Council—The Pharmaceutical Society from a Public Point of View—General News.

Tasmania.—Quackery—Prosecution of Dr. Murphy—Registration in New South Wales—Friendly Societies' Act.

Victoria.—Pharmacy Board—Pharmaceutical Society—Pharmacy Board Prosecutions—Dentists' Registration Bill—Personal.

GENERAL NEWS.

Review.—Contribution towards a Bibliography of New Zealand.

The Adelaide Jubilee Exhibition.—Fifth Notice (Report on Aërated Water Apparatus—Bottles—Filters—Sundries—Sheep Dips—Paints for Household Use).

Students' Corner.—Report and Comments on the Nineteenth Competition.

Correspondence.—Is Pharmaceutical Legislation Desirable? (J. B. Burden)—Prescribing Proprietary Medicines (Lindsay Knight)—A Cure for Hard Times (Practical)—The Title Analytical Chemist (Victorian)—Carriers' Charges (T. Shanasy).

Special Articles.—Chlorination Processes for the Extraction of Gold—Cheap Apparatus for Distilling Essential Oils—Trade-marks applied for.

(Copies may be obtained at the London office, 42 Cannon Street, E.C., 6d. each, or the journal will be supplied to extra Australasian subscribers at 5s. per annum.)

DIARY FOR NEXT WEEK.

Secretaries of societies are requested to send early information of approaching meetings.

Tuesday, January 17.

Royal Institution of Great Britain, at 3 P.M. Professor G. J. Romanes on "Before and After Darwin."

Wednesday, January 18.

Pharmaceutical Society, 36 York Place, Edinburgh, at 8.30 P.M. Mr. Daniel Gorrie on "Extractum Ergotæ Liquidum." Mr. William Lawson on "Syr. Hypophosph. Co.," and "Syr. Ferri Phosph. Co." Adjourned discussion on the B.P.C. Formulary.

Thursday, January 19.

Chemical Society, at 8 P.M. T. E. Thorpe, F.R.S., and W. T. Smith, M.B. (Lond.) on "Morindon." T. E. Thorpe and F. J. Hambly on "Manganese Trioxide." "Contribution to the Theory of the Vitriol Chamber Process," by Professor Lunge, and "Studies in Coal Distillation," by Lewis T. Wright.

Linnean Society, at 8 P.M. Mr. Spencer Moore on "The Influence of Light on Protoplasmic Movement" (part 2). Dr. R. W. Schufeldt on "Studies of the Machrochires" (humming-birds and allies), and Mr. W. H. Beeby on "New British Plants."

Friday, January 20.

Royal Institution of Great Britain, at 9 P.M. Lord Rayleigh on "Diffraction of Sound."

Saturday, January 21.

Royal Institution of Great Britain, at 3 P.M. Lord Rayleigh on "Experimental Optics."

Metropolitan Reports.

A PAINFUL SENSATION was caused in Greenwich on Wednesday by the report that Louisa Ostler, the wife of an assistant with Mr. Brown, chemist, of 55 Trafalgar Road, had murdered her little boy of 2½ years. It appears that Mrs. Ostler, who is near her confinement, had lately suffered from religious mania, and was attended by her sister. While the latter was absent from the room, Mrs. Ostler took a table-knife and cut the boy's throat, the head being nearly severed from the body. When charged with the murder, Mrs. Ostler appeared not to realise what she had done, simply saying, "God told me I must do this."

SUSPICIOUS DEATH.—Mr. Braxton Hicks held an inquest at Putney, on Wednesday, regarding the death of Phoebe Knight (47), a widow. The deceased had a lodger, Robert Conrad Mossman by name, who was known as a doctor, and practised as such. In evidence Mossman stated that he was a qualified medical man, although his name was not on the register. He also stated that the deceased had frequently complained of pleurisy, and he had prescribed for her a draught of 10 grains of bromide of potassium on the evening of January 5, the day before she died. In the afternoon of the same day he had given her a morphia and camphor water. She died at twenty minutes to seven in the morning. The evidence of other witnesses was directed to show that Mossman was not sober, or was muddled when he made up the draught for Mrs. Knight, accordingly the coroner adjourned the inquest for a month to permit of an analysis of the contents of the stomach and other matters.

POISONING CASES.—Benjamin Furnell (30) residing at Plaistow, swallowed twopence worth of laudanum with suicidal intent, and when taken before the magistrate on December 5, regretted that he had not taken sixpence worth.—Dr. G. Danford Thomas held an inquest on December 6 regarding the death of Elizabeth Margeson, aged 55, a single lady of independent means. From the evidence of her attendant, Dinah Toakley, it appears the deceased lady had suffered from strange hallucinations, and had threatened to commit suicide. On the previous Tuesday afternoon she told witness that she had taken poison. Medical assistance was called, but she died within an hour and a half, after suffering great agony. Mr. William James, chemist, High Street, Notting Hill, who knew the deceased as a customer, deposed to supplying her with tincture of aconite, which, she alleged, she required to assuage neuralgic pains. He made an entry of the sale in his "poisons book," and asked the deceased to append her signature, but she would merely write a cross to her name, which witness wrote. Mr. W. F. Palmer, a surgeon, who had seen Miss Margeson before her death, stated that it was a case of aconite poisoning, and the jury returned a verdict accordingly.—Mary Wilson (58) was charged at Bow Street, on Saturday, with attempting to commit suicide with laudanum. The prisoner, who had once been in comfortable circumstances, under the protection of a gentleman, was now destitute, and wished, in consequence, to take her life. She was remanded.—Dr. Danford Thomas held an inquest at Middlesex Hospital, on Thursday afternoon, on the body of a boy of 6, who, on November 24 last, drank some spirits of salts from a ginger-beer bottle. The deceased was taken to the hospital at the time, and, getting better, returned home, but got worse, and was again taken to the hospital, where he died on Monday.

THE excessive use of sugar is said to be a predisposing cause of catarrh of the mucous membranes, and of eczema.

BABBIT METAL is an alloy of copper, tin, and antimony, made by fusing 2 parts of tin with 1 part of an alloy made by fusing together 12 parts of tin and 8 of regulus of antimony, then remove from the fire and add 4 parts of copper, and, when that is incorporated, other 12 parts of tin. Protect the fused mixture from oxidation with a covering of powdered ebareol. The composition of the finished product is 3·7 parts of copper, 7·4 of antimony, and 83·9 of tin

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor, will much oblige.

BIRMINGHAM.

SCIENTIFIC EXHIBITS AT THE MIDLAND INSTITUTE.—The annual conversazione of the Birmingham and Midland Institute was opened on Tuesday evening, and continued until Friday. Numerous scientific objects were shown, and experiments made. Messrs. G. & W. Purser & Co. exhibited a highly-effective refrigerator, remarkable for the fact that its valves produce a practically perfect vacuum. In the experiments shown by the refrigerator one had an opportunity of seeing water freezing while it boiled, and at an adjoining desk the paradox of ice causing water to boil, and heat making it cease from boiling. Mr. Warren de la Rue exhibited some vacuum tubes containing minerals in a highly phosphorescent condition. Mr. C. V. Boys showed his ingenious method of producing very fine threads of quartz or glass required in a delicate instrument for the detection of slow changes of temperature. Mr. Boys also demonstrated how extremely fine threads of sealing-wax may be spun by means of a Voss electrical machine drawing them out between its two poles. One of the tables was of especial interest just now, as it contained specimens of the auriferous deposits extracted from the Gwynfynedd mine lately discovered in North Wales. Dr. Poynting contributed a form of electroscope so delicate as to show with a single voltaic cell the faint generation of electricity which takes place when a man brushes his hair.

THE MALICIOUS PROSECUTION CASE.—At the Birmingham County Court on January 5 an application was made for a new trial of the action brought by Joseph Sims, a warehouseman, against Richard Brown, of Spring Hill, Birmingham, wholesale druggist. The action, which was tried last month before Judge Chalmers and a jury, was to recover 50*l.* damages for wrongful imprisonment, and the jury found for the plaintiff for the amount claimed. Mr. Alfred Young now applied, on behalf of the defendant, for a new trial, on the ground that one of the jurymen had been guilty of misconduct, and also that the verdict was against the weight of evidence. The misconduct alleged against the jurymen was that he had made up his mind and expressed a strong opinion upon the case before hearing any of the defendant's evidence. The judge remarked that if the verdict was right the conduct of the jurymen would be immaterial, and said there were two substantial issues left to the jury. One was whether the plaintiff had been guilty of felony; and the second was whether, assuming that no felony had been committed, the defendant had reasonable and probable cause to give plaintiff into custody, and acted without malice. After some discussion between counsel, the judge granted the application for a new trial. He thought the evidence was overwhelming in support of the proposition that the defendant had acted reasonably, and he was not satisfied with the verdict. He ordered defendant to pay the costs of the last trial, and also to pay into court the 50*l.* awarded as damages, to abide the event of the new trial.

HULL.

FIRE.—On Monday Mr. E. Riley, chemist, Lowgate, was making some furniture paste at the back of the shop, when the mixture boiled over. In attempting to take it into the back yard he fell, being severely burnt about the hands and face. The premises also caught fire, and considerable damage was done before the flames were extinguished. Mr. Riley was subsequently taken to the Infirmary and his injuries attended to. Several other persons who were in the premises at the time had narrow escapes.

IRELAND.

FIRE.—Early on the morning of January 5 the premises of Messrs. O'Neill & Co., grocers and druggists, Maghera,

were destroyed by fire. The inmates effected their escape in their night-clothing through a back window.

R. WILLIAM LAIRD, pharmaceutical chemist, who has for many years managed the medical hall and general drug establishment of Dr. Leonard & Co., Earl Street, Dublin, having decided to remove with his wife to Sydney, N.S.W., has been lately presented with a highly complimentary address and a purse of sovereigns by the principal and staff of the firm named, expressing deep regret at his departure and best wishes for his future. Mr. William Laird is the brother of Mr. John Laird, pharmaceutical chemist, Merick.

LIVERPOOL.

LACSYMON & Co., who were recently prosecuted by the Pharmaceutical Society for the illegal sale of poisons have registered themselves as a limited company, and advertised in the Liverpool papers that "they are now dispensing prescriptions at about half the usual trade prices. Quality the leading feature in all departments at the Stores in Han Street, and as the profits on drugs, &c., even at half the usual prices, are larger than upon any other class of goods, there is no temptation to introduce an inferior quality of drugs. This department is managed by a gentleman thoroughly qualified by examination to dispense, and the public may rely on the greatest care being exercised in dispensing, as well upon the purity of the drugs sold."

BEECHAM'S PILLS IN PENNY BOXES.—ALLEGED FRAUD.—The local police court on Friday, January 6, Richard Beecham Pritchard, an elderly man, described as "a chemist," was charged with obtaining money by selling pills which he presented to be genuine Beecham's pills, whereas they wereurious and of no value. Mr. Marks, who appeared to prosecute on behalf of the police, said this man was booked under the name of Thomas Davis, but he believed the real name was Pritchard, and it would be better to have the proper name on the books. The prisoner obtained 2s. 3d. from a Mr. Alfred Breddy, who kept a shop at 32 Great Homer Street. It would be no doubt be within the knowledge of the court that there was a firm named Beecham & Son, who advertised very largely; indeed, it must be within the knowledge of everybody that they advertised Beecham's pills, and from the extent of their advertisements one would imagine it was a very prosperous concern, and the prisoner had endeavoured to take a share in the prosperity without the knowledge of the proprietors. It seemed that he had been a chemist and druggist, or something of that kind, and about four months ago he went to the shop of Mr. Breddy and saw his wife. The prisoner opened a parcel, and took out from it a card having affixed to it eighteen boxes of pills, and he offered to sell the card for a shilling, and he stated that they were Beecham's pills.

Mr. Raffles: I remember the case under a warrant.

Mr. Marks: His worship would remember that the informant stated that the husband then came in, and he appeared to have had some suspicion about the matter, as he asked the prisoner if they were genuine Beecham's pills, and he said they were, and a shilling was given to him for the card. Some months afterwards the prisoner went again, and offered a card with twenty-four boxes on it for 1s. 3d., and he again said they were genuine Beecham's pills. The prisoner denied it, but there was the testimony of Mr. and Mrs. Breddy, and it was shown that Mr. Breddy had some suspicion, as he asked the prisoner to put his name on the card, and he wrote his name as Thomas Davis, 9 Sarah Street. The prisoner falsely pretended that these were genuine Beecham's pills. It was proposed to ask for a remand, because there were about fifty cases, and it was desirable to prove more than one case.

Alfred Breddy said he kept a shop at 32 Great Homer Street. He remembered seeing the prisoner in his shop, and being engaged in some transaction with his (witness's) wife, selling some pills. Witness asked him a question about them, whether they were genuine Beecham's pills, and he distinctly said "Yes," and witness paid for them, believing what was said. That was the first occasion. It was the first card that he asked the prisoner to write his name upon, as he had some doubt about the matter. He asked the

prisoner to write his name and address on the card so that he might be able to send for more if he wanted them.

Mrs. Breddy, wife of the last witness, stated that she remembered the prisoner coming to her shop on the first occasion, and he asked her to buy some pills—Beecham's pills at a penny a box. As she was buying them her husband came in and asked him if they were genuine Beecham's pills, of St. Helens, and he said they were.

Walter Robert Andrews said he was manager for Thomas Beecham & Son, proprietors of Beecham's pills, and their business place was at Westfield Street, St. Helens. The prisoner was not an agent for the firm, and had no connection with them whatever. The pills produced were not made by Beecham & Son, and the firm did not make them up in that style. The card was a forgery. The price of the genuine Beecham pills was 1s. 1½d. per box. No person was allowed to sell such pills. He had had numerous complaints from all parts of the country of a person assuming the name of Beecham and selling pills on a card.

Detective-constable Lamothe deposed to having apprehended the prisoner in Walton workhouse, when he said, "I plead not guilty, and will tell Mr. Raffles what I have got to say."

The prisoner said he was a chemist in reality, and had kept a shop in Everton. When he disposed of the shop about two years ago he had some patent medicines left—about nine boxes—and as he could not dispose of them he put them in small boxes and sold them, and what he sold were genuine Beecham's pills.

The prisoner was then remanded for seven days.

Mr. Malkin watched the case on behalf of Messrs. Beecham & Son.

MANCHESTER.

CHEMICAL ENGINEERING.—On Wednesday evening the first of a series of twelve lectures on chemical engineering was given at the Technical School by Mr. G. E. Davies, late Government inspector of alkali works. The lectures are intended specially for those connected with chemical, bleaching, dyeing, calico printing, and paper works. Mr. W. Mather, head of the well-known engineering firm of Mather & Platt, presided, and there was a fair attendance.

NEWCASTLE-ON-TYNE.

BRISK BUSINESS.—A chemist in one of the Tyneside towns in the course of a conversation with a representative of a Newcastle daily paper, is said to have made some unintentional revelations as to the manner in which the New Year's holidays are observed in his neighbourhood. He is generally kept pretty hard at work in extracting teeth, but on the day after the New Year came in he passed on all cases of "tewthwark" to a rival practitioner, in order that he might have time to supply lotion for black eyes, to attend to bruised faces, and to sew up gaping wounds. From the time of taking down his shutters to the time of putting them up again he was kept so well employed that he had to take his refreshment whilst standing on his feet.

SAD DEATH OF A DOCTOR.—An inquest was held at Bedlington on Tuesday, into the circumstances of the death of Dr. Peter Henry McLaren, of Bebside Furnace. On Sunday night Benjamin McLaren, engineer, Heddon Colliery, a brother of deceased, visited him, and before he left, at about a quarter to eight o'clock, deceased poured about two drachms of syrup of chloral into a tumbler and took it. The house-keeper looked into the room about a quarter-past eight, and found him lying back in his chair dead. Dr. James McLaren, brother of deceased, was of opinion that death was owing to syncope, the result of taking an overdose of chloral. There was nothing whatever to lead to the supposition that his brother took chloral for the purpose of destroying his life, as when he last saw him he was in the best of spirits. The jury returned a verdict accordingly.

RATING OF CHEMICAL WORKS.—The chemical works of H. L. Pattinson & Co., Felling, which have come into possession of the Liberator Building Society of London, who were mortgagees for 60,000l., were rated at 5,170l. net annual value. An appeal against this rating has just been decided by Mr. Ridley, of Newcastle, barrister, to whom it was

referred. The building society have never carried on the business of chemical manufacturers, but have been dismantling the works, and have also been paid a sum of 7,000*l.* for a period of years in consideration of their not manufacturing certain chemicals. Originally the society contended that they were not beneficial occupiers, rateable as regards either their possession or the receipt of the subsidy of 7,000*l.* Ultimately, after some earlier appeal to the sessions, this point was abandoned, and the question remained what was the rateable value, assuming the building society to have been occupiers. Mr. Ridley's award is that as regards the assessment made on October 26, 1886, the sum of 5,717*l.*, the gross estimated rental of the chemical works, be reduced to 1,235*l.*, and the sum of 4,408*l.*, stated as their rateable value, be reduced to 1,050*l.*

NORWICH.

TESTIMONIAL.—A silver salver with a suitable inscription was presented last week to Mr. J. C. Pentney, chemist and druggist, by his brothers of Court Nelson, A.O.F., as a recognition of their esteem and an acknowledgment of his services in the cause of Forestry.

SHEFFIELD.

LEAD-POISONING.—One of the Sheffield dailies has taken upon itself the duty of calling public attention to the dangers of storing acid water in leaden cisterns. It seems that one of the "interviewer" species had, in the course of conversation with a local analyst, gleaned from him the information that he had lately had some water analysed from a certain house in a fashionable suburb. The water contained something like half a grain of lead to the gallon, and in this way the family doctor was able to trace the illness which had for some time existed among the members of the household in question. The result was a long article, and, of course, a host of letters next day, with a general revival of the "lead scare." The writer of the article in question shows his ignorance of chemistry by recommending "sulpho-hydrate of ammonium" as a ready test for lead; his error is pointed out by one of the correspondents. Apart from newspaper scares there is no doubt that the water from "Redmires" reservoir is distinctly acid. Whether the acid is "organic" (as is generally supposed) or otherwise matters little. That it acts on lead is proved by the fact that it is only "Redmires" water that shows traces of lead, the water from the other reservoirs being quite free. The matter was well threshed out between the late water company and the Corporation last year in the House of Lords, and it now remains for the Corporation to show their public spirit by "neutralising" the water. It is interesting to know that lead is entirely removed by passing the water through a good charcoal filter. Experiment proves this beyond question. The revival of the scare should therefore increase the sale of filters for the time.

PHARMACEUTICAL AND CHEMICAL SOCIETY.—The ordinary monthly meeting of this Society was held on Wednesday night in the Society's rooms. After Mr. Newsholme had introduced to the meeting Mr. W. H. Massey, the new President, a paper was read by Mr. John Humphrey, on 'The Future of Pharmacy.' After some references to evolution generally, Mr. Humphrey went on to show that the progress of pharmacy had been in the direction of specialising; and as he was of opinion that further progress was but a part of one process, he took it that future development would be in the same direction. He believed that there was good reason for assuming that the services of the pharmacist would become more and more indispensable, and he himself be a far from unimportant factor in the world's progress. He then proceeded in a happy manner to detail the advancement of the pharmacist, and laid it down as a necessary thing that there should be required of apprentices much more extended elementary education than is now demanded of them, including the beginnings of all the subjects now found of service by advanced pharmacists. Then the terms of pupillage should be considerably modified, and greater care taken to train the youth aright. The essayist did not appear to be in favour of compulsory examinations. He thought less stress should be laid upon them, and that a voluntary examination in practical phar-

macy and dispensing should be passed by assistants, and that principals should decline the services of all not so qualified. On the other hand, he thought that every established pharmacist should be accomplished in analysis and science generally. After referring to the work of the Pharmaceutical Society, proposing that local associations should be federated to it, and that there should be a reform of titles, Mr. Humphrey concluded by deprecating the folly of depending upon any external agency for protection, and urging pharmacists to help themselves—to be true to each other, and trust patiently to see the future of pharmacy assured.

After the reading of the paper, which was frequently applauded, a somewhat animated discussion took place. The President was not quite at one with the author in all his opinions. He thought English pharmacists, like their German brethren, ought to have a certain amount of protection, and he could not see any irregularity in apprentices and unqualified assistants selling scheduled poisons under the supervision of their principals. Mr. Ellinor quite agreed with the idea of federation, and saw no reason why there should not be a Sheffield branch as well as a North British branch of the Pharmaceutical Society. He also spoke strongly in favour of education, and urged young men to take advantage of it.

Mr. Appleton thought that pharmacy would take some time to catch up with Mr. Humphrey's ideal.

Mr. Newsholme said he had come to the meeting expecting to pick some holes in Mr. Humphrey's paper, but he had found absolutely nothing he could not agree with. He thought with Mr. Humphrey that there was more room for pharmacists now than at any past time, and that they might still look forward to a brilliant future. He used the word "pharmacists" as distinguished from mere drug vendors. Parliament would never be induced to legislate for the protection of the latter. The whole strength of pharmacists lay in their education, and they must recognise the fact that they cannot be too well educated.

Mr. Grierson thought the moral of the whole paper was that young pharmacists, being still in the "plastic" stage, should do their best to educate themselves, and that fully developed pharmacists should be in the first place honest, and in the next self-reliant. The possessor of these qualities in a high degree must necessarily, he thought, be an ideal pharmacist, and given a majority of ideal pharmacists, a brilliant future for pharmacy was assured. Mr. Humphrey's theories were founded on historical data and governed by natural laws, so that he could scarcely controvert them.

Mr. Haining thought the Pharmaceutical Society should do something to prevent unqualified men holding dispenserships in public institutions.

Mr. Humphrey, in replying, said that German pharmacists, if afforded protection by the State, had the most minute details of their tariff controlled by the same, and had everything arranged for them in a manner which no Englishman would stand. He did not object to unqualified assistants selling poisons, but merely wished to point out the uselessness of legal restrictions when law-promoters broke their own laws. He held that monopolies were not justifiable, and objected to an enforced curriculum. Individual effort would accomplish all that was needed in this direction.

After the announcement of some donations the following gentlemen were elected associates:—Messrs. Cox, Twelves, Lancaster, Reckless, jun., Martin, H. T. Fox.

WORKINGTON.

CHARGE AGAINST A CHEMIST.—At the Workington Petty Sessions last week, an application was made on behalf of Mr. William Bowness, chemist and druggist, Workington, for an adjournment of two cases brought against him by the police for alleged drunkenness and assaulting the police on December 29 last. It appears that at four o'clock on the morning in question Mr. Bowness was returning from a card-party when Sergeant Reed set upon him, and in the struggle which ensued Mr. Bowness got his face bruised. Sergeant Reed's statement was that Mr. Bowness was drunk, and was the assaulting party, but the evidence brought by Mr. Bowness's solicitor showed that he was sober, and "not at all in a fighting mood." After hearing the evidence, the bench said it was so contradictory that they would dismiss both cases against Mr. Bowness.

SCOTLAND.

ABERDEEN.

CITY HOSPITAL.—A new pavilion has been added to the Epidemic Hospital at a cost of 1,062*l*.

CHEMISTS' REUNION.—The Aberdeen chemists' assistants and apprentices held their annual reunion in the lecture room, Albert Hall, last week. After tea a short musical programme was gone through, and subsequently the hall was cleared for dancing, which was kept up with enthusiasm until an early hour.

HOSPITAL SUNDAY.—The annual collection for the Royal Infirmary was held in most of the city churches on New Year's Day, the sum total collected being about 800*l*. Aberdeen led the van in this movement, the first collection having been made in 1764. The 30,000*l*. Jubilee Extension Fund has now reached 26,166*l*.

CONTRAVENTION OF PUBLIC HEALTH (SCOTLAND) ACT, 1867.—A. Fraser, jun., son of A. Fraser, chemist, Kennethmont, was charged in the police court on January 4 with having wilfully exposed himself while suffering from scarlet fever in Rosemount Place, Aberdeen, by entering a cab there and driving to the Joint Station, and then walking amongst the people. This he had done after being warned as to his liability to prosecution by the medical officer. The magistrate imposed a fine of 2*l*s., with 1*l*. 1*s*. 3*d*. of expenses, or ten days' imprisonment.

EDINBURGH.

DR. W. INGLIS CLARK is to be one of the contributors to the new edition of "Chambers's Encyclopedia," which is in course of preparation. He is announced to write on the subjects of "Alkaloids" and "Analysis," and we understand that he will have a hand in the editing of chemical matters generally.

MR. D. B. DOTT, F.R.S.E., has accepted an engagement with Messrs. Duncan, Flockhart & Co., manufacturing chemists, Canongate. He will take charge, in conjunction with Dr. Inglis Clark, of the experimental and research laboratories of the firm, as Dr. Clark will now devote the whole of his time to the manufacturing departments.

THE UNIVERSITY CHAIR OF BOTANY.—The names of Professor Bayley Balfour, Oxford, Professor Bower, Glasgow, and Professor M'Nab, Belfast, are mentioned as the most likely candidates for the vacant chair of botany in the university. It is understood that two of the leading Kew officials will offer themselves as candidates. The curators will meet in about ten days to decide upon the preliminary arrangements.

ROYAL SOCIETY.—At a special meeting held on December 6, Mr. J. T. Bottomley exhibited and described an improved constant-volume air thermometer. Mr. Bottomley said the object of the modifications he had effected was to improve the accuracy and adaptability, and increase the range of the instrument. With this view he found it advisable to use the thermometer and gauge separate from the manometric part of the instrument, or joined to it only by a flexible connection.

The word "store" appears to have a seductive and delusive effect on certain members of the public. Recently a store opened a few doors from Mr. Blank's establishment. He, to be in the fashion, called his place the several-adjuncted store. An occasional customer of his, in search of the new shop, is seduced by the word "store," and drops into Blank's. On getting what she wanted at the usual price, she remarked, "Oh, how cheap you are! Mr. Blank used to charge me ever so much more!"

THERE has not been a meeting in connection with the Price-list Committee this winter. This is significant of the prevailing state of affairs, so far as prices are concerned. The committee, however, was appointed by a general meeting of the trade in Edinburgh and Leith, and it has been remarked in several quarters that they ought to report to a general meeting and then, if necessary, go into retirement. Even although no business of the kind, strictly belonging to the committee, were done, yet a talk over affairs might be useful, and it would at any rate tend to maintain the friendly

feeling which, so far, has characterised the members of the trade in the district.

OF private price-lists there appears to be no limit. They are circulating freely at present in all quarters of the city and suburbs. Some contain prices for drugs as well as patents; others contain prices for patents only. A collection of them forms curious and entertaining reading. One point on which all are more or less alike is the dispensing department. They all contain, in their preface, a eulogistic reference to it. After a description of the purity of the drugs used and the care bestowed on compounding, one firm says their charges are much below those of chemists; a second, who advertises himself as a chemist by examination, says his prices are not those of Edinburgh chemists; a third, with a shade more dignity, says his prices will be as moderate as is consistent with the employment of skill in the department.

BETWEEN the prices which are current now and those which were obtained during the last twenty years no comparison can be fairly made. At present some articles afford a fair profit, while others are cut down so as to scarcely pay for the paper in which they are wrapped. The present state of prices is characterised by an utter want of uniformity.

THE disappearance of the price-list, although to be regretted in some respects, is not perhaps such a calamity as at first consideration might appear. There was always a certain tyranny about it that was a restraint to anyone who was not chained to use and wont. It is to be hoped that there will not be a general rush into undignified lowering of prices. There are already evidences of a reaction against cutting. We hear of customers returning from their patronage of the cheap shops to those where a stand is made for quality, not lowness of price. The times are treacherous, and caution is required in steering one's way.

GLASGOW.

MEDICAL CLUBS.—A movement is on foot for the formation of medical associations in this city, similar to the working men's clubs of England.

SUDDEN DEATH IN A CHEMIST'S SHOP.—Last week a man about 35 years of age entered the shop of Mr. Thomas Adams, chemist, 440 St. Vincent Street, and asked for a powder. While he was being served he suddenly dropped down and expired, heart disease being the immediate cause of death.

PRESCRIPTION PRICES.—Mr. Charles T. Cockburn, one of the cutting chemists of this town, is advertising that during last year prescriptions dispensed at his stores were supplied to the public for the sum of 762*l*. 15*s*. 4*d*., the total value of which, he says, was 2,538*l*. He gives no indication how he arrives at this latter figure.

THE BRITISH MEDICAL ASSOCIATION will hold its annual meeting here this year on August 7 to 10 inclusive. The general meetings and meetings of the sections are to be held in the various class-rooms of the university, Gilmorehill. Professor W. T. Gairdner is the president elect, and several of his colleagues on the university staff have been selected to deliver addresses. Dr. James Morton is to be the president of the section of pharmacology and therapeutics.

SOCIETY OF CHEMICAL INDUSTRY.—A meeting of the Scottish section was held in the Philosophical Hall on Tuesday, Mr. J. J. Coleman presiding. A paper on "The Action of Water on Lead," by Professor Carnelley and Mr. W. Frew, was read by the latter, in which the results of various experiments in connection with the laying of lead pipes for the water supply of towns were described, and the action of different chemicals on the metal explained. Loch Katrine water was found to be unusually corrosive, and its introduction into Glasgow had led to a series of useful experiments. In almost all cases it was found that corrosion was much greater when the pipes were exposed to the air than when the air was excluded. Several other papers were read.

INFERIOR DRUGS.—At a meeting of the Town Council held on Monday, the sanitary inspector submitted a report in which he stated that urgent complaints had lately been made by medical practitioners regarding the useless, and in some instances harmful, character of certain drugs and

ointments, and in consequence he had obtained and submitted to the analyst certain samples. Upon a sample of zinc ointment the analyst reported that it contained only doubtful traces of benzoic acid, and only 12.2 per cent. of oxide of zinc. The sample yielded no crystals of benzoic acid, but gave evidence of its presence on treatment with perchloride of iron. A sample of sweet spirit of nitre was very deficient in nitrous ether, giving not quite twice its volume of nitric oxide gas (five volumes gave 9.8 volumes of gas). The inspector added that he believed the quality of these and other drugs at present foisted on the public is very inferior and far beneath the British Pharmacopœia standards. In the view that many medical men must be held legally responsible for those who are mixing and dispensing drugs and ointments in their dispensaries, although they themselves may not be cognisant of any inferiority or adulteration, it might serve the interests of the public meantime if in these cases a public notice was taken of them, and a warning given. Dr. Wilson, in the course of a discussion on the report, said that there was no standard in regard to some of those medicines, and with regard to spirit of nitre, it could never be kept for any time at the strength which was prescribed by the authorities.

THURSO.

CATTLE-POISONING.—On January 6 a strange case was reported by a small farmer in the vicinity of Thurso, to the effect that three of his cattle were found dead in the morning in the byre. He suspects that the cause of death will be found in the oil-cake with which the animals were being fed, from the fact that a cat and some ducks which ate of the same material were also found dead in the morning.

Pharmaceutical Society of Great Britain.

PRELIMINARY EXAMINATION.

The following are the questions which were given on Tuesday, January 10, 1888, one hour and a half being allowed for each subject:—

LATIN.

I. (For all Candidates.) Translate into Latin:—

1. I had taught the man's son.
2. He cannot but send an ambassador to you.
3. What prevents your doing this?
4. Those very beautiful books, which were given to my brother by his master, have been lost.
5. The war being ended, those who had come to the banks of the river began to return home.

II. Translate into English either A. (Caesar) or B. (Virgil).

(Candidates must not attempt both authors.)

A. CAESAR.

1. Hoc proelio facto, reliquas copias Helvetiorum ut consequi posset, pontem in Arare faciendum curat atque ita exercitum transducit. Helvetii, repentino ejus adventu commoti, quum id, quod ipsi diebus viginti aegerrime confecerant, ut flumen transirent, illum uno die fecisse intelligerent, legatos ad eum mittunt; cujus legationis Divico princeps fuit, qui bello Cassiano dux Helvetiorum fuerat. Is ita cum Caesare egit; si pacem populus Romanus cum Helvetiis faceret, in eam partem ituros atque ibi futuros Helvetios, ubi eos Caesar constituisset atque esse voluisset.

2. Dum haec in colloquio geruntur, Caesari nuntiatum est equites Ariovisti propius tumulum accedere, et ad nostros adequare, lapides telaque in nostros conjicere. Caesar loquendi finem facit, seque ad suos recepit, suisque imperavit ne quod omnino tulum in hostes rejicerent. Nam etsi sine ullo periculo legionis delectae cum equitatu proelium fore videbat, tamen committendum non putabat, ut, pulsus hostibus, dici posset eos ab se per fidem in colloquio circumventos.

Grammatical Questions.

(For those only who take Caesar.)

1. Decline, in full, *uno die, ejus legationis, eam partem*. (Par. 1.)

2. Give the principal parts of the verbs in italics. (Par. 2.)
3. Parse, fully, *faciendum, commoti, aegerrime, transirent, ituros*. (Par. 1.)
4. Give some rules, with examples, for the use of the subjunctive mood.

B. VIRGIL.

1. Et jam finis erat; quum Jupiter aethere summo Despicens mare velivolum, terrasque jacentes, Litoraue, et latos populos, sic vertice coeli Constitit, et Libyae defixit lumina regnis. Atque illum, tales jactantem pectore curas, Tristior et lacrimis oculos suffusa nitentes, Alloquitur Venns: O, qui res hominumque Deumque Aeternis regis imperiis, et fulmine terras, Quid meus Aeneas in te committere tantum, Quid Troës potuere, quibus, tot finera passis, Cumectus ob Italiam terrarum clauditur orbis?
2. Rex erat Aeneas nobis, quo justior alter Nec pietate fuit, nec bello major et armis; Quem si fata virum servant, si vescitur aura Aetherea, neque adhuc crudelibus occubat umbris, Non metus, officio ne te certasse priorem Poeniteat. Sunt et Siculis regionibus urbes, Arvaque, Trojanaque a sanguine clarus Aecetes.

Grammatical Questions.

(For those only who take Virgil.)

1. Decline in full, *aethere summo, mare velivolum, meus Aeneas*. (Par. 1.)
2. Give the principal parts of the verbs in italics. (Par. 1.)
3. Parse, fully, *quo, quem, certasse, poeniteat, clarus*. (Par. 2.)
4. Give some rules, with examples, for the use of the subjunctive mood.

ARITHMETIC.

1. What is the difference between the daily income of two men who receive respectively 250*l.* and 720*l.* a year?
2. If 2 cwt. 1 qr., costing 3*l.* 5*s.* per cwt., and 1½ cwt., at 4½ guineas per cwt., be mixed together, what is the value of a pound of the mixture?
3. If $\frac{2}{3}$ of a business be worth 440*l.*, what is the value of $\frac{3}{11}$ of it?
4. Divide 2.499 by .00525; and find the value of 1.045 of 5*l.* 7*s.* 6*d.*
5. A cask of liquid weighs 417 kilog. 170 gr.; the cask weighs 1 kilog. 17 décag. Find the value of the liquid, at 2*s.* 2½*d.* per kilog.
6. A bankrupt, whose effects are worth 201*l.*, owes his creditors 133*l.*, 212*l.*, and 325*l.*, respectively; what will each receive?
7. A person pays one tax of 10*d.* in the pound, and another of 5 per cent. on his income. His remaining income is 545*l.* What is his gross income?

ENGLISH.

1. Analyse the following sentence:—

Though inly chafed at this delay,
Lord Marmion bears it as he may.
The Palmer, his mysterious guide,
Beholding thus his place supplied,
Sought to take leave in vain.

2. Parse fully the following sentence:—

He stepped before the Monarch's chair,
And stood with rustic plainness there.

3. Correct the following sentences, giving your reasons:—
(i.) The King with the Lords and Commons form the Legislature.
(ii.) Did he not confess his fault and begged to be forgiven?
(iii.) Can England spare such men as him?
(iv.) The logical and historical analysis of a language often coincides.

4. In the following passage supply the necessary capital letters, and put in the stops and inverted commas where requisite:—at their head rode a man in years, whose long

white hair escaped from his plumed cap and mingled with his venerable beard how is this said the chief reigning in his steed young rienzi the youth looked up as he heard that voice and then flung himself before the steed of the old noble and clasping his hands cried out in a scarce articulate tone it is my brother noble stephen a boy a mere child the best the mildest see how his blood dabbles the grass.

5. Give a short biography of some distinguished English writer; or, describe some town with which you are familiar; or, some journey you have taken.

Pharmaceutical Society of Ireland.

THE monthly meeting of the Council was held on January 4. Present—the President, Mr. J. E. Brunker, M.A., in the chair, Messrs. Wells, Beggs, Hayes, Grindley, McCormack, Allen, Simpson, and Charles Evans.

THE CALENDAR WRONG.

The Registrar read the following letter:—

Privy Council Office, Dublin Castle.

December 10, 1887.

Sir,—Referring to your letter of November 4, I am directed to state that upon consideration of the memorial of Mr. R. T. Downes in respect to the election of the treasurer and registrar of your Society, it appears that the Order in Council of January 26, 1876, is in accordance with his view and the law, and that the regulation on the subject as given in the Society's calendar, p. 44, has been altered so as to appear to apply to the election of these officers at the annual meeting of the Society. It also appears that the sequence of the regulations as given in the calendar, pp. 42 to 60, do not in many cases coincide with the regulations which were approved by the Orders in Council of January 26, 1876, and February 15 and November 12, 1877. I am accordingly to transmit herewith copies of the above-mentioned Orders in Council, and to request that you will be so good as to submit the same to the Council of your Society, and favour me for the information of the Privy Council with some explanation of the discrepancies between the Orders in Council and the regulations as they appear in the calendar of the Society.

I am, &c.,

W. R. B. KATE.

The PRESIDENT: We have not been at all aware that the by-laws have been appearing in our calendars in a totally different order from that in which they appeared in the *Dublin Gazette* as sanctioned by the Privy Council. On going back through the calendars, I found that they have been printed in the same order since 1876, so that our very first calendar contained those discrepancies. As you were a member of the original council, Mr. Hayes, do you remember who edited the first calendar?

Mr. HAYES: Dr. Aquila Smith edited them all through, but I do not know anything about the discrepancies.

Mr. ALLEN: There have been serious alterations in some places.

The PRESIDENT: The present case is one in point. The original by-law, No. 12, under the head "Meetings of Council," provided that the "election of treasurer, registrar, clerk, or other officers should be by open voting," &c. In the calendars that regulation has appeared under the heading of "annual meetings." So that, while we thought we were right in resisting Mr. Downes's contention under the regulations as they appeared in the calendar, he was right according to the regulations as they had been sanctioned by the Privy Council. The only explanation we can give to the Privy Council is that we were quite unaware of these discrepancies, which shall be remedied in the forthcoming calendar. Mr. Allen has taken a great deal of trouble to make our regulations correspond with those originally sanctioned by the Privy Council in 1875, and has added in their proper order the regulations which have been sanctioned since.

A Member: How long is it since Dr. Aquila Smith gave up editing the calendar?

The PRESIDENT: Five or six years. Mr. Fennell edited the last two calendars before he himself left the employment of the Society.

Mr. ALLEN: I have found the regulations published in 1876, and they coincided with those passed by the Privy

Council. It seems an extraordinary thing to have altered the sequence.

Mr. SIMPSON: What year was it done in?

The PRESIDENT: In the original calendar as published in 1876.

Mr. BEGGS moved that the Registrar be directed to inform the clerk of the Privy Council that the Council of the Society were unaware of the differences in sequence between the regulations as published in the *Gazette* and in their calendars, and that these would be set right in the forthcoming edition.

Mr. GRINDLEY seconded the motion, which was unanimously agreed to.

CORRESPONDENCE.

A letter from the secretary of the Pharmacy Board of New Zealand acknowledged the receipt of a copy of the Society's calendar.

Letters were read from Mr. Harry C. Draper and Dr. Whittle thanking the Council for having re-elected them examiners.

A letter was read from Mr. J. C. C. Payne, of Belfast, stating that, as he found difficulty in attending the meetings of the Law Committee, he felt obliged to resign his membership of that committee.

On the motion of Mr. Allen, seconded by Mr. Simpson, it was resolved that Mr. Payne should be requested to reconsider his resignation.

EVENING MEETINGS.

The PRESIDENT requested all the members of the Council to do what they could to promote the evening meetings which were proposed to be held, and to provide materials for them. Mr. Carter Draper had undertaken to act as secretary, and was endeavouring to get pharmacists to read papers or supply exhibits. Up to the present, however, the amount of support received had been most discouraging. The year before last, after the evening meetings had been once started, they succeeded very well. The Vice-President had plenty of materials to supply, but desired to see others coming forward first. Mr. Draper had hoped to be in a position to issue summonses for the first meeting next week, but had not yet received sufficient promise of support, although he had written numerous pressing letters.

DONATIONS.

Donations were received of *strophanthus* and its preparations from Messrs. Burroughs, Wellcome & Co., and from THE CHEMIST AND DRUGGIST of their Diary for 1888.

On the motion of Mr. Allen, seconded by Mr. Hayes, thanks were voted to the donors.

THE REGISTER.

A report was read from the registrar in reference to members of the Society whose names had been struck off the roll in consequence of their not having answered letters according to the statute.

The PRESIDENT remarked that of course those gentlemen did not lose their licences, but they could not get on the register of the Society again without paying a fee, or by the special leave of the Council.

Some financial and law business having been disposed of, the Council adjourned.

RESULTS OF THE JANUARY EXAMINATIONS OF THE SOCIETY.—Passed Preliminary Candidates: Messrs. Alister, Cunningham, Enright, Nesbitt, Suche, Wright; six failed. Passed Licence Candidates: Messrs. Drapes, Hill, O'Sullivan, Smith; four failed.

To DETECT traces of aldehyd in alcohol evaporate to about one fifth of the original volume, and pour the residue into a white porcelain evaporating-dish. Then pour under it, through a funnel, the orifice of which rests upon the bottom of the dish, a solution of diphenylene-diamine hydrochlorate. The yellow colour formed at the zone of contact of the two liquids disappears on the addition of alkalis and re-appears on acidulating the liquid.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

DR. CAZENEUVE, professor of chemistry and toxicology at the Lyons Faculty of Medicine and Pharmacy, met a few days ago with a painful accident. While he was experimenting with a new compound his retort exploded, and a piece of glass lodged in his eye. He was immediately attended to, but it is not known yet whether his eye may be preserved or not.

"JOURNAL DER PHARMACIE VON ELSSASS-LOTHRINGEN" is the new name of the familiar *Journal de Pharmacie d'Alsace-Lorraine*. All the announcements, headings, &c., are also in the German language, the French translation only appearing underneath, or further on. The change, it appears, has been made in obedience to gentle hints from headquarters; it began with the present January number.

PASTEUR'S INSTITUTE is rapidly approaching completion; the mason work is finished, and men are busy with the inside fitting, painting, &c., which are expected to be perfected by the beginning of the coming summer, when the buildings will be formally inaugurated. Then Pasteur, with his attending physicians and chemists—he is himself simply a chemist, not a doctor of medicine—will move, together with the patients, to their own property. They are now paying to the Paris municipality 10,000*fr.* rent for a piece of ground of 2,500 square metres, while the new grounds measure 11,030. The new institute will consist of two distinct buildings; one with a frontage of 40 metres facing the Rue Dutot will be the more ornamental, although built in the rather severe Louis XIII. style. The other, 60 metres front, intended for public consultations, will open on the Rue des Fourneaux, and covered galleries will connect the two. Over two million francs having so far been contributed towards the erection and maintenance of the institute, there seems to be no fear of starvation, and no need of asking favours of the Paris Municipal Council.

THE PARIS SOCIETY OF PHARMACY held their annual meeting on January 4, and, as usual, devoted most of the time of a lengthy sitting to the installation of new officers, and the reading of addresses, reports, and obituaries. As the proceedings of the society were faithfully recorded in THE CHEMIST AND DRUGGIST at the time of their occurrence, it is no doubt unnecessary to recall them now. But most societies like to listen to an eloquent review of the labours performed during the year, and no self-respecting secretary would retire without delivering the expected oration. Outgoing Secretary Thibault did not neglect this duty, after the new officers had duly addressed the meeting on being installed. The board for this year is as follows:—President, M. Delpuch; vice-president, Professor Bouchardat; perpetual secretary, Professor Planchon; annual secretary, M. Bourquelot. After a report by M. Schaeffele on several prize medals to be awarded, M. Beauregard read an interesting paper on the "Metamorphoses of Vesicating Insects," relating several new and original observations just made by him on the habits of these singular creatures. Having received in June from a place near Avignon some living specimens of a variety of blistering fly, he had observed them in a cage provided with earth to represent the ground. The insects having copulated, the females with their mandibles bored holes in the earth, and deposited there some eighty or one hundred eggs, after which they carefully filled up the cavity and obliterated all traces outside that might indicate the presence of their offspring. On hatching, the young insects feed first on the eggs of aptera, and next on honey, changing form several times, until all of a sudden the perfect insect flies out in the air. M. Beauregard thinks the mystery surrounding an insect known so long is owing to the fact that four-fifths of the life of the creature is spent under ground, very deep, and under a form quite dissimilar from its familiar appearance, when it bursts forth in countless swarms, quite unexpectedly. M. Beauregard's account of his raising and feeding the insects to the perfect state in artificial soil was very instructive, only it had the disadvantage of coming near the end of a sitting unusually protracted.

Gazette.

PARTNERSHIPS DISSOLVED.

COLEMAN & FEARNES, Armley and Wortley, general medical practitioners.

FROST & BROWN, Birmingham, Stechford, and Yardley, surgeons.

GOODALL & Co, Newcastle-upon-Tyne, oil merchants; as far as regards H. J. Vasey.

LAMBERT, L., & FOLEY, E., under the style of Lewis, Southsea, Southampton; Westbourne Grove, London; and Birmingham, dentists.

MAY, ROBERTS & Co., Clerkenwell Road, wholesale chemists' sundriesmen; as far as regards F. Sykes.

MEYER, M. R., & Co., Mincing Lane, merchants; as far as regards D. Hildesheim.

PURNELL & RISDON, Wells, surgeons.

RITSON & GLOVER, Newcastle-upon-Tyne, homœopathic chemists.

SCHOFIELD, J., & SON, Pontefract and Castleford, veterinary surgeons.

WHEATCROFT, N. G., & DALTON, G. (under the style of the Buxton Mineral-water Co.), Buxton, mineral-water manufacturers.

WIGG BROTHERS & STEEL, Runcorn, copper extractors and alkali manufacturers; as far as regards C. Wigg.

THE BANKRUPTCY ACT, 1883.

ADJUDICATION.

GOUGH, WILLIAM LAWRENCE, Middlesborough, wholesale druggist, manufacturing confectioner, and drysalter.

FIRST MEETING AND PUBLIC EXAMINATION.

BAILEY, JOSEPH, Brentor, Devonshire, Altarnun, Cornwall, Wearde Quarry, near Saltash; Millbay Docks, Plymouth; and Camplehay, near Tavistock, mine proprietor and manganese merchant. First meeting, Jan. 20, 18 Frankfort Street, Plymouth. Public examination, Jan. 27, County Court, East Stenhouse.

NOTICES OF DIVIDENDS.

CANTER, GEORGE ROE, Anerley Road, Anerley, Penge, physician and surgeon. First and final div. of 4*s.* 4 $\frac{3}{4}$ *d.*, Jan. 23, or any subsequent Monday, Ash Lea, Croydon Road, Anerley, Penge.

PRATT, HENRY JAMES, York, chemist and druggist. First and final div. of 13*s.* 5 $\frac{1}{4}$ *d.*, Jan. 16, Official Receiver's office, York.

SKENE, WILLIAM, West Bromwich, surgeon and doctor of medicine. First and final div. of 8*d.*, Jan. 16, 25 Colmore Row, Birmingham.

WILCOCKS, NATHANIEL GEORGE, Bath, soda-water machinist and engineer. Second and final div. of 2*s.* 3 $\frac{3}{4}$ *d.*, any day, Mr. E. T. Collins's, 39 Broad Street, Bristol.

RECEIVING ORDER.

SADLER, JESSE JOHNSON, Walsden, Lancashire, valetta, ammonia, and chemical manufacturer.

ORDER MADE ON APPLICATION FOR DISCHARGE.

DUGDALE, EDWIN, Liverpool (trading as the Liverpool and North and South Wales Panacea Beer and Beverage Manufactory), panacea beer, beverage, and mineral-water manufacturer and dealer. Discharge suspended for twelve calendar months.

EXAMINATION (SCOTLAND).

RANNIE, C. J., & Co., drysalters, 105 Virginia Place, Glasgow, and CHRISTOPHER JAMES RANNIE, drysalter, 105 Virginia Place there, the sole partner of said firm, as such partner, and as an individual. To be examined in Sheriff Guthrie's chambers, County Buildings, Glasgow, Jan. 16, at 11 o'clock.

PREDIGESTED FOOD.

The Claims of Dr. Dobell, Consulting Physician, late Senior Physician to the Royal Hospital for Diseases of the Chest, London, to be the originator of Pre-digested Peptonised or Pancreatised Foods, which now play so important a rôle in the relief and cure of wasting diseases. The Competition for the Barbier Prize of the French Academy of Medicine.

THE conditions of the Barbier Prize are as follows:—"Ce prix, qui est annuel, sera décerné à celui qui aura découvert des moyens complets de guérison pour les maladies reconnues incurables, comme la rage, le cancer, l'épilepsie, les scrofules, le typhus, le choléra morbus," &c. And, in the event of no *mémoire* completely attaining the somewhat Utopian end proposed, "Des encouragements pourront être accordés à ceux qui, sans avoir atteint le but indiqué dans le programme, s'en serrent le plus rapprochés." In the competition for 1887 eleven memoirs, or works, were submitted to the Academy, of which two were on the prevention and cure of "La Rage," and in the opinion of the Academy the work of "M. Galtier, Professeur à l'École vétérinaire de Lyon," so nearly answered the conditions stated by the founder of the prize that they have awarded it to him.

Below we print an abstract of an essay sent in by Dr. Dobell, which has an historic interest in connection with the use of the popular form of peptonisation and pancreatisation of foods. It will be seen that Dr. Dobell's contribution did not treat directly of any of the special "incurable diseases" specified in conditions of the prize. In presence of others more exactly responding to the conditions of the prize this treatise was, therefore, naturally *hors concours*; but as it will appear that Dr. Dobell's purpose in competing was to challenge criticism on the claims which he has set forth, we propose to assist him in this object by the publication of this abstract. Dr. Dobell says:—

"The idea of submitting foods to the influence of the digestive juices before introducing them into the stomach was originated by me, and first satisfactorily carried out by me in the form of pancreatised or pre-digested fat, called by me 'Pancreatic Emulsion of Fat,' in 1863. (See (1) Dr. Dobell's work on 'Tuberculosis,' 1866; (2) his paper on 'The Action of Pancreatine upon Fat,' *Brit. Med. Journ.*, November, 1880, and (3) a letter from Mr. George Brownen, F.C.S., October, 1886.)

"My experiments at the Royal Hospital for Diseases of the Chest on the use of pancreatised fats and oils in the wasting of phthisis were published in the *Lancet*, September 10, 1864, June 10, 1865, November 11 and 18, 1865, and November 17, 1866, and subsequently in my work on 'Tuberculosis,' 1866, and in my work on 'Loss of Weight,' 1882. The results of my experiments were brought by me before the Royal Society in 1868, in a paper the abstract of which was published in the Proceedings of the Royal Society, No. 97, on 'The Special Action of the Pancreas on Fat and Starch,' &c.

"The pre-digestion, and especially the pancreatisation, of foods, and the subsequent introduction of them into the digestive tract, which I thus originated, has since been carried out most extensively in practice, and now forms the most prominent, if not the most important, characteristic of modern medical practice in all forms of defective assimilation, debility, and wasting, and is attended with most satisfactory results, saving numerous lives, as all the profession now admits: the benefits not being restricted to any one disease, but applying to all forms and stages of disease in which digestion and assimilation have failed. (See Appendix for a list of the various forms in which pre-digested or peptonised or pancreatised foods are now prepared by various manufacturers. Also the author's paper on 'Fat and Starch in the Nutrition of Children,' reprinted in the seventh edition of his work on 'Diet and Regimen'.)

"My investigations and experiments have been followed up by several subsequent observers, and most conspicuously, in this country, by Sir William Roberts, of Manchester, who in 1879 brought the subject forward, in his lectures before the Royal College of Physicians, London, and again in 1880, in his work on 'The Digestive Ferments.' But both in his lectures and in his work he omitted to give due importance

to the action of the pancreatic juice upon fat, discovered by Bernard, which must be considered *its special function*, because, whereas proteids and starch can be digested by pepsin and by diastase, the pancreas alone has the power to emulsify fat. (See the author's letter to the *Brit. Med. Journ.*, November 27, 1880, in which he pointed out this omission.)

"No one but myself can claim to have originated and first rendered practicable the idea of administering food previously digested; and in the pre-digested food first administered by me the fat was emulsified by the pancreatic juice.

"I respectfully submit, therefore, that a means of relief and of cure applicable to so large a range of diseases, viz., all those dependent on, or accompanied by loss of, the digestive or assimilative functions, is a fair subject for the Barbier prize; and as the discovery of the functions of the pancreas in animal digestion is chiefly due to the great French physiologists, Corvisart and Bernard, and as my first experiments were made with pancreatic juice and based upon the discovery of Bernard in relation to its emulsifying properties, it would seem to be especially appropriate that my work should be the subject of the French prize; and the more so because I have, from first to last, refused to accept any pecuniary or other personal advantage from my labours and their results. In the words of the *Lancet*, November 17, 1866, 'It has been placed fairly before the profession, the author reserving to himself no pecuniary interest or advantage whatever.' Writing on the same subject in the *Gazette Hebdomadaire de Médecine et Chirurgie*, 1868, M. Fossagrives said, 'Dr. Dobell has continued with great energy his researches on the utility of fatty emulsions obtained by the aid of the pancreatic juice in all cases where nutrition is seriously impaired. Dr. Dobell wisely repels the idea that pancreatic emulsion is a specific in phthisis. He is entirely justified in saying that to repair the ravages of want of nutrition is to give every favourable opportunity to nature and to prolong the life of the patient.' And the *Brit. Med. Journ.*, August 15, 1885, speaking of the pancreatic method of pre-digestion, says, 'It has proved useful in many hands, in uræmic vomiting, gastric catarrh, pernicious anæmia, gastric ulcer, and pyloric and intestinal obstruction. Its introduction has probably done more than any other therapeutic measure of recent times to lessen infant mortality.'

Dr. Dobell's contribution was followed by an appendix, from which we have only space to quote the letter of Mr. G. Brownen, F.C.S., referred to above, dated October 15, 1886. He says:—

"Dear Sir,—With reference to the pancreatisation of fats for use as a therapeutic agent in the treatment of disease, I beg to report to you that I have made careful search among the works contained in the following libraries, viz.:—Royal College of Surgeons, Chemical Society, Pharmaceutical Society, and the library and reading room of the British Museum. I find, as, indeed, I had anticipated, that no one had made use of the fact discovered by Claude Bernard—that the pancreas emulsifies fats—and had used such pancreatic emulsion of fat in the treatment of disease prior to the year 1863. The first published notice of pancreatised fat and of pancreatic emulsion of fat as a remedial agent I find in the *Lancet* for September, 1864, by yourself, giving your experience with this new medicament dating back to the previous year (1863). From this date forward I find several additional reports of your own, published in the medical journals and in the 'Proceedings of the Royal Society.' I can also find a number of professional references of pancreatic emulsions or pre-digested fat to *yourself as its originator* in medical practice."

"I also find that between the years 1864 and 1870 you observed and utilised the action of the pancreas and of pancreatic emulsion upon a variety of foods, such as starch (1868), albuminoids, &c., and so paved the way for the later experimentalists on pre-digested foods. I have also examined the records of the Library of the Patent Office, and I am unable to find any recorded attempt to utilise the digestive powers of the pancreas for food or medicine until 1870, or six years after the first of your published reports upon the value of the pancreatised foods. The first patent I have been able to find was granted to S. Darby, August 22, 1870, No. 2,312, and is a claim to use the pancreas (of ox, cow, calf, or sheep) in the manufacture of fluid meat. This claim was held until its expiry in 1884.

"To sum up the results of my examination, I may say that I cannot find any one advising or using an emulsion of pancreatic or pre-digested fat (or food) before your notices in 1864, 1865, 1866, and 1868. Before these dates all references to the pancreatic juices are confused and contradictory, and regard the secretion as a physiological curiosity; and, as for its practical use in the remedial treatment of invalids, no one can claim priority to yourself.

"(Signed) GEORGE BROWNEN, F.C.S.

"P.S.—Other references and dates can be given if required."

THE ANALYSIS OF CATTLE FOODS.

By WILLIAM LAWSON.

IN one sense the adulteration of cattle foods may be said to be non-existent, since, there being no authoritative standards, the manufacturer is left to the freedom of his own will, and thus the composition of such commodities will be determined by the bias of his mind as to what is proper. When this induces him to mingle with his wares ground marble, silica, or gypsum, to the extent of 20 or even 50 per cent., the detection of adulteration *that* we can call by no other name—is rendered easy. But when he uses effete, or it may be injurious, materials of an organic nature, it becomes a matter of great difficulty—in many cases quite impossible—to satisfactorily detect them by chemical means. Physiological tests, however, frequently succeed where these fail, and it sometimes happens to those engaged in the work of testing these articles to have samples sent for examination for poisons, but in which nothing of a poisonous nature can be found after very careful search. Yet the administration of such to cattle may have been productive of abnormal physiological symptoms, these being the first indication of there being anything amiss, and this unlooked-for outcome can only have been occasioned by the presence of some undetectable noxious ingredient, either added to or formed in the food. From this it will be readily understood that no rough-and-ready test is available for the detection of these. The microscope is often of service, but as a rule the suitability or non-suitability of any compound for feeding purposes is decided by the proximate analysis; the search, successful or the reverse, for the more commonly occurring injurious substances which may be within the reach of chemical or physical tests, such as wild mustard, &c. is useful, the rest being left to the digestive organs of the animal, which rapidly and satisfactorily decide the matter.

The analysis of cattle foods generally extends to the determination of the moisture, the oil (by extraction with hot ether in Soxhlet's apparatus or other suitable arrangement), the albuminoid compounds or flesh formers, the starch, digestive fibres, &c., the woody fibre, and the ash. All the details to be followed in accomplishing this analysis need not be here given, since the necessary dexterity to carry it through is only acquired after much practice and many disheartening failures. This refers more particularly to the determination of the albuminoid compounds, which are got by finding the total nitrogen contained in the substance by combustion of a weighed portion with soda lime (there are other methods, Kjeldahl's and others, but the soda lime is the common one), and estimation of the evolved ammonia into which the nitrogenous matters are converted. This latter is accomplished by passing the ammonia into a measured volume of standard sulphuric acid (contained in a Will and Varrentrapp's nitrogen bulb tube), and titration of the residual acid by standard alkali (ammonia preferably): or by collection in hydrochloric acid, and weighing as platinum salt. The ammonia thus found is calculated into nitrogen, and this multiplied by 6.25 gives the amount of albuminoid compounds. Sometimes a higher figure than 6.25 is adopted, but as a rule this is high enough for such articles as feeding stuffs. As before hinted, to do this successfully requires practice, while much experience is also requisite before the proper deductions can be made from the results found. Where no standards exist to declare what shall, or shall not, enter into the composition of the articles in question, any mixture, such as 1 or 20 of oil, or 1 or 50 of flesh-formers, or any other proportions, may be used, and such combination may thus be either rich or poor, or something intermediate, and yet be free from adulteration.

Discrimination, the product of experience, is thus absolutely necessary to allow of the formation of a correct judgment. A prevailing idea is that the oil is entitled to the place of merit in a food, though some would place the albuminoid compounds in that position. However that may be, it is essential in properly prepared foods that the valuable constituents shall be related to each other in certain well-defined ratios, in order that the best results may follow their administration. It by no means follows that because a food may be endowed with an abnormal proportion of one constituent that, therefore, the beneficial results known in other circumstances to follow the administration of that constituent must necessarily ensue. The reverse is notoriously the case, one example of which will suffice. Decorticated cotton-cake, in which the flesh-formers commonly amount to 40 or 42 per cent. (one recently examined contained over 48), is, when given alone, frequently decidedly injurious, from the inability of the animals to digest it. This is owing to its excessive albuminoid content, and when this is reduced by the suitable admixture of some more purely carbonaceous material, good effects at once follow.

All that precedes refers mainly to compounded foods, the cotton-cake being chosen simply to illustrate a point. When the food is an uncompounded one, it can, as a rule, be readily told from the analysis whether it should be classed as a good, bad, or indifferent sample of such material. Thus, if a sample of linseed-cake meal contains about 32 per cent. of flesh-formers, 10 or 12 of oil of a bland, non-pungent odour or taste, 32 of mucilage, sugar, digestible fibre, but no starch, it may be safely characterised as an excellent one; while another, with 20 per cent. or so of flesh-formers, a few per cent. of oil (sometimes so low as 1 or 2), acrid and pungent, together with starchy matter, may at once be pronounced adulterated. A similar definite statement may also be made anent other uncompounded articles. It remains to be added that the true feeding value of cakes, &c., can only be determined by their effects on the animal, chemical analysis only giving theoretical value. When the former is known, of course any future chemical examination will determine the value of a sample of the same nature, because it can be compared with a standard founded on the results of the physiological and chemical tests combined. Much valuable work has been done in this field, notably by Lawes and Gilbert, records of whose work are to be found almost everywhere. Much information can also be had in "Church's Agricultural Chemistry," in the "Royal Agricultural Year-book," and in the "Journal of the Highland and Agricultural Society." The money value of cattle foods fluctuates, partly from the various ideas held by the merchants as to the rates of profits such commodities ought to bear, partly from the condition of the markets, &c. Some instances could be quoted to illustrate the former of these reasons. For example, the writer had two samples of linseed-cake given him by a farmer for analysis. In the report granted it was remarked that both were almost exactly alike in composition, and were of equal money value. It turned out, however, that the samples belonged to different individuals, one of whom had purchased in the west of Scotland at a rate 2% per ton less than the other, who had bought his south of the Tweed. Inquiries were instituted, which resulted in the discovery that both cakes were from the same source, and a substantial reduction was ultimately made in the price. No doubt instances of a similar kind, but with reversed geographical conditions, sometimes occur. One golden rule in this matter is to deal with a firm of undoubted honour, for after all much has to be left to the dealer.

CARBONATE OF SODA should not be used for preserving milk. The milk sours as usual, but as quickly as lactic acid is formed it is neutralised, and the resulting lactate of soda, being a purgative, causes diarrhoea in children to whom the milk is given.

A PLEASANT ANÆSTHETIC is obtained by the mixture of equal parts of chloroform and eau de Cologne. This is recommended by Mr. J. Stephens, anæsthetist of the Brighton Dental Hospital, who says (*Brit. Med. Journ.*) that the mixture is liked by ladies. It is, of course, to be used with an inhaler.

Jegal Reports

E. MERCK v. LEHN & FINK.

THE preliminary investigation in the criminal action brought by E. Merck, the German chemical manufacturer, against the New York firm of Lehn & Fink was concluded on December 27. The following is a summary of the principal evidence, so far as it has not already been reported in THE CHEMIST AND DRUGGIST:—Mr. Fink, partner in the defending firm (who gave his evidence unsworn, and, by the ruling of the judge, was exempted from cross-examination), stated that he had handled Merck's goods ever since 1860, both in Germany and in the United States. He emphatically denied ever having authorised any one to tamper with Merck's labels, or having known anything about the matter until he received a letter from Merck in December, 1885, asking whether he ever had such labels printed. In reply to this witness had written to Merck explaining the matter, and shortly after that letter he noticed a bottle which bore on the outside wrapper a blank label with Merck's name and the name of the article in writing in the blank space. Not having seen any of Merck's written labels for a long time, Mr. Fink inquired of his foreman how such label happened to get in his possession, and was informed that the clerk in charge of the printing had these labels printed some time previous for the purpose of relabelling such of Merck's goods as had been in stock for some time, and bore only an inside label on the bare bottle, but no outside label on the wrapper. In order to prevent mistakes Mr. Lampe had one thousand of these labels printed to be used for the wrappers only, each of the wrappers thus labelled bearing a genuine label inside. Mr. Fink said that on being told this he asked for all these labels, and burnt them. Mr. Fink stated further that Merck from time to time had sent to his firm loose labels for putting up smaller packages than those in stock for use in case of breakage, or in cases where labels were soiled or destroyed in any of several ways which Mr. Fink described. The witness also distinctly denied the truth of the allegations made by former employes of his, that he had given instructions for tampering with Merck's labels, refuting these allegations one by one, and showing that in several instances the goods which it was alleged had been substituted for Merck's were dearer than, or equally as dear as, those of the prosecutor. Mr. Fink deposed that he had an intimation to the effect that a search was contemplated as early as September 10, on which day a former employe, now in business for himself, stated to him (Mr. Fink) that he had been approached by Merck's agent to find out if Lehn & Fink had labels printed in America. Mr. Fink felt so sure of having no labels in his store that were printed in America that he paid no attention to the statement at the time. As to the search and the arrest, the officers and Mr. Weicker searched his premises for two hours, and they were in no way obstructed. Lehn & Fink never had one of Merck's seals, nor had Mr. Weicker found one when searching the house. Mr. Weicker seized a quantity of goods which he declared counterfeit, but afterwards was compelled to leave behind, having been shown invoices from Merck for these very articles. Mr. Fink's evidence was corroborated by his partners, Messrs. Eberhardt and Plant. The latter witness also further stated that Lehn & Fink continuously received labels from Merck, sometimes as many as a hundred of one kind, but that this had been much more common in former years, because of late, it being known that Lehn & Fink were the largest importers of Merck's goods, their own label was accepted as readily as Merck's. He explained various instances in which it had been necessary to repack Merck's goods, such as goods being of a deliquescent or corrosive nature, and again when goods had been improperly labelled, such as goods being labelled "C. P.," which afterwards turned out not to be "C. P." Mr. Plant next testified as to the cost of the various articles claimed to have been substituted for Merck's, which in every case, he said, was as high as or higher than Merck's. In reply to a question as to whether he had personal knowledge of any of the substitutions testified to by former employes, he stated that he knew of the ergotin case from the fact that he himself had sold the ergotin in question. The article was manufactured by Leo, and cost considerably more than Merck's, and for

that reason had remained in stock quite a while, some four or five years, meanwhile losing very much in weight through evaporation. An order came for a large quantity from a manufacturer of patent medicines, and Leo's ergotin was examined and found that it had dried up. To each five-pound jar sufficient glycerine was added to bring it back to its original standard. It was not sold under Merck's label, but under Lehn & Fink's; this was the only instance in which glycerine or anything else had been added to ergotin that he remembered. Several of the defendant's warehousemen and clerks gave evidence of a similar character.

The witnesses for the defence also included Mr. Lampe, formerly in the service of Lehn & Fink as clerk, and now one of their travellers. This witness stated that in September, 1886, when he had charge of Lehn & Fink's printing department, he ordered 1,000 "Merck" labels to be printed, but he did so entirely on his own responsibility, and without consulting any of the firm. These labels were to be used for the outside labelling of Merck's goods, and for this purpose only. Mr. Fink accidentally discovered them, spoke to him about it, and upbraided him for his action. No other "Merck" labels had ever been printed for Lehn & Fink to his knowledge, and none had ever been used except for the purpose named. He had never seen Merck's labels on any other goods but Merck's in any of the several departments in which he had been employed, although any improper use of labels would have come to his knowledge if it had occurred. Some of the labels seized by Merck's agent during the execution of the search warrant this witness declared to be perfectly genuine, and stated that they had been in his possession for years. On December 21 Mr. Justice Kilbreth announced his decision, which was to the effect that the defendants should be bound over in nominal bail of \$300 each to appear before the grand jury.

A PATENT OIL.

IN the Court of Session, Edinburgh, on Tuesday, before Lord Kinnear, judgment was given in the case of Robert Hutchison v. Patullo Brothers. Pursuers claimed 10,000*l.* damages in respect of an alleged infringement of their patent, obtained in 1873, for "improvements in treating oils and fats." Their invention was claimed to be for thickening or oxidising animal and vegetable oils and fats, and for making improved lubricants by combining these oxidised or thickened oils or fats with mineral oils. This patent, they alleged, had been infringed by the defenders. The latter denied that they had infringed the letters-patent, and called on the pursuers to give specific particulars of the acts of infringement of which they complained. Combinations of thickened or oxidised oils with mineral oils had been commonly made and used both by the trade and members of the public for lubricating and other purposes for a period long prior to the date of the pursuer's letters-patent without challenge. The defenders also maintained that the letters-patent were invalid, as the combining of thickened vegetable or animal oils with mineral oils to form lubricants was not the subject-matter of a grant of letters-patent within the meaning of the Patent Acts; and the pursuers claimed an invention different from or not embraced in that disclosed in the provisional specification.

Lord Kinnear, in the Outer House, had found that the patent was void in law, sustained the defences, and dismissed the action with expenses. The Second Division, however, on appeal, without pronouncing on the merits of the case, decided that it was one for inquiry, and remitted it back to the Lord-Ordinary for that purpose. The case having been heard in full, Lord Kinnear now gave judgment. Pursuer, he said, claimed to have discovered a method of thickening fat oil so as to obtain an oil of sufficient gravity for heavy machinery, which would be free from the natural tendency of fat oils to thicken in use, and for that purpose he thickened fat oils in such a way as to make them suitable for mixing with mineral oils, making a satisfactory lubricant. Pursuer described his process as consisting mainly of subjecting the oils to heat while exposed to the air in shallow vessels. He explained that the main purpose of this process was to remove the blueness or fluorescence in mineral oils, and to thicken the oxidised fat oils. It had been proved by sufficient experience that oxidised oil might be produced by this process at any thickness or gravity up to the thick

ness of castor oil, and that the oil so produced was readily mixable with vegetable oils. Whether the thickening was entirely due to oxidation did not appear to be decided, but it was not disputed that the result which the pursuer arrived at was produced by the combined action of heat and exposure to the air. Defenders were said to have infringed the letters-patent by manufacturing or dealing in lard oil. There could be no doubt that lard oil was a thickened animal oil, or that the thickening was produced by a process by which it was exposed to air and heat, but it was brought about by an entirely different process from that described by the pursuer in his specification. Messrs. Price & Co., London, had thickened or oxidised oils, and mixed them with mineral oils prior to 1873. Their process consisted, not of exposing the oil in shallow layers, according to the method of the pursuer, but of heating it by steam and blowing air through the heated oil. This process was more expeditious than that of the pursuer, and was entirely different.—His Lordship held that there was no infringement by merely exposing or thickening oils. With reference to the second claim, which dealt with the mixing of oils which have been treated, it appeared to him that the process of mixing either involved no invention, or skill, or ingenuity, and that it was not a proper subject for a patent, or that it did involve some skill or ingenuity and some knowledge, and in that case the process was not described in the specification.—The case was dismissed with costs.

MEDICAL INHALERS.—JOHN GORDON, JUNR. v. KENNEDY AND THE VOLTAIC BATTERY COMPANY.

THIS case came on for hearing before Mr. Justice Day, sitting without a jury, in the Queen's Bench Division on Thursday. The plaintiff claimed specific performance of an alleged contract; and in the alternative 10,000*l.* damages. It seemed that the plaintiff, together with two other gentlemen, were owners of a patent entitled "Improvements in Inhalers for Medicinal Purposes." Early in 1886 Mr. Gordon addressed a communication to Mr. Kennedy, containing an offer made on behalf of himself and his co-patentees to let the Voltaic Battery Company have the right to manufacture and sell all the inhalers made under the patent upon payment of certain royalties, and on their undertaking to push the sales by advertising and other means. The offer, the plaintiff said, was accepted on March 23, 1886. The defendants, however, asserted that the contract was signed by Mr. Sorkins (Mr. Kennedy's clerk) without their authority; and that, even if Mr. Sorkins had signed the alleged contract, he did so subject to the ratification of Mr. Kennedy, which it had never had. Mr. Bompas, Q.C., and Mr. Henry were the counsel appearing for the plaintiffs, whilst Mr. Poley and Mr. Parkes represented the defendants.

His Lordship was clearly of opinion that there was no truth in the alternative plea whatever. He was quite satisfied that whether the agreement was one by which the defendants were bound or not, it was not entered into subject to any ratification by anyone. The story was too ridiculous. He had also come to the conclusion that Sorkins was acting with the authority of Kennedy, with whom he was in constant communication whilst in America, and whose manager Sorkins was. Had he signed the document without authority, Kennedy should have told Gordon so on the first opportunity he had. He, therefore, gave judgment for the plaintiff, for specific performance, with costs.

His Lordship refused to stay execution.

THE DENTISTS ACT.

AT Wisbech Borough Police Court, on Tuesday, Frederick W. Bradley, chemist and druggist, was charged with infringing section 3 of the Dentists Act, 1878, which provides that a person taking or using the name or title of a dentist (either alone or in combination with any other word), or of dental practitioner, or any name, title, addition, or description implying that he is a person registered under the Act, or that he is a person specially qualified to practise dentistry, unless he is registered under the Act, is liable on summary conviction to a fine not exceeding 20*l.* Mr. R. E. Melsheimer prosecuted on behalf of the British Dental Association, and

Mr. Waddy, Q.C., defended. Counsel stated that the defendant in his numerous advertisements and cards, and on his plate, had carefully avoided the word "dentist," describing himself as "F. W. Bradley, A.P.S., Eng.," that his advertisements appeared to have been worded with the express object of keeping clear of a prosecution under the Act, and that, owing to the great care thus exercised, it had been necessary to entrap the defendant by sending two clerks from London as patients. The Dentists' Register was put in as *prima facie* evidence that the defendant was not a registered dentist. Two witnesses named Grimmette and Luce proved that they called upon Mr. Bradley at his advertised address, on August 13, and on seeing him Grimmette said, "Are you Mr. Bradley, the dentist?" The defendant, it was alleged, said he was. The witnesses were shown into a room containing a dentist's chair, revolving instrument table, instruments, &c. A fee of 2*s.* 6*d.* was paid for stopping Luce's tooth. In answer to the witness Grimmette, the defendant said he was "trained," or, according to the witness Luce, he practised at the London Dental Hospital. Both witnesses were closely cross-examined by Mr. Waddy, and agreed that, although they both asked the defendant if he was Mr. Bradley the dentist, and he replied "Yes," the defendant never volunteered the statement that he was a dentist. Mr. Waddy submitted that the defendant had never used the title "dentist," or "dental practitioner," and held that no infringement of the law had taken place. The Bench found that the defendant had infringed the law, and fined him 5*l.* and costs, at the same time consenting to state a case for the Divisional Court. It is understood that this is a test case, and the first of a series of prosecutions throughout the country.

BANKRUPTCY REPORTS.

Re JAMES READ HORNER, Salterhebble, Chemical Manufacturer.

THE examination of this bankrupt was held at the Halifax County Court before Mr. Alexander, registrar, on Tuesday. In reply to Mr. England (Official Receiver), the debtor said he had been in partnership with a man named Carter until two months before filing his petition. His statement of accounts did not give details of what he had done between the partnership and filing the petition. Questions were put to the debtor by Mr. Rhodes with a view of showing that in a number of cases the debtor while in partnership had received moneys from tradesmen, and had accounted (if at all) for only part. The retiring partner had kept the cash-book, and some entries in a ledger which the debtor kept were made in pencil, and had reference to many of the items in question. The examination was adjourned a month, the debtor being ordered to file detailed accounts for the month prior to his failure.

Re WALTER LOWE, Manchester, Chemist and Druggist.

THE examination of this debtor was resumed before the Registrar of the Manchester Bankruptcy Court on Wednesday. The Official Receiver, Mr. C. J. Dibb, said he had to ask his honour to adjourn the public examination of the debtor *sine die*, as he had not yet filed his statement of accounts, and there was no appearance of his doing so. Mr. Lowe was called into the witness-box, and stated that he did not think he should be able to file the accounts asked for, at any rate for some time to come. The Official Receiver said the examination had already been adjourned from time to time, and no good end would be served by a further fixture. The Registrar said under those circumstances he would accede to the application of the Official Receiver, and adjourn the case *sine die*. It may be remembered that when before the court on a previous occasion, Mr. Lowe was asked to give the recipe of his cough mixture, but he resolutely declined to do so, remarking that the creditors were apparently desirous of picking his brains. The Registrar thereupon ordered the case to go before the learned judge, who decided in favour of Mr. Lowe.

Trade Notes.

MOTTO FOR A LINIMENT.—"All's well that ends swell."

MR. C. S. ASHTON has purchased the business of **Mr. J. R. Ithymian**, 69 Spring Gardens, Buxton.

MESSRS. ALFRED HOLT & Co., drug, chemical, and oil makers, have removed to 19 Old Hall Street, Liverpool.

MR. SAMUEL COCKING, JUN., of the firm of Cocking & Co., Yokohama, intended leaving for Europe, *via* the United States, on December 20 last.

MESSRS. BROWNE & ATKINSON have commenced business patents registration and transfer agents at 55 & 56 Chan-ry Lane, London, W.C.

APPLICATION has been made for a patent for a composition for the removal of human and *other hair* from the face, neck, &c.

MESSRS. C. J. VAN HOUTEN & SONS, of Amsterdam, have received the gold medal of the Newcastle Exhibition for their manufactures.

MR. CHARLES BEERINGER, agent for the Johann Maria Farina & Co., "Pantaleon" branch, has removed from Moorfields to 17 Philpot Lane.

We are asked by Messrs. G. & G. Stern to state in reply to inquiries that their pumiline preparations are not a secret or patent medicine, but only the pure essence and extract of low-grown pumilio pine.

MR. THOMAS F. JOHNSTONE has been admitted a partner of the old-established firm of Low & Co., chemists and druggists, Dumfries. For the past ten years Mr. Johnstone has managed the business on behalf of Mr. Low. The new firm takes the style of Low & Johnstone.

MR. J. TUTTON, late manager for Messrs. Kay Brothers, Stockport, and formerly for the General Apothecaries' Company, London, has purchased the business, recently carried on by Mr. Welsh, and formerly by Mr. Mabson, at 19 Market Place, Great Yarmouth.

HOP BITTERS.—It will be seen by an advertisement in his issue that the Hop Bitters Company have decided to supply a smaller-sized bottle of their preparation as well as the 4s. 6d. bottle which is now sold. The new bottle is to be priced for retail at 2s. 6d.

MESSRS. COLTHURST & HARDING, manufacturers of paints and colours, 16 Fish Street Hill, have purchased the manufacturing premises lately occupied by Messrs. Robertson, Temple & Co., and known as the Alpha Works, Millwall, E., and will carry this business on in conjunction with their old-established works at Bristol.

MESSRS. ELLIMAN, SONS & Co. are sending out exceptionally artistic show-cards, as it is necessary to term them, though the card proper is produced on metal. These are stylishly framed and glazed, and form an attractive advertisement. The centre represents the familiar "lame hunter" and the "lame hunter cured," while the corners of the design show the heads of various animals. The card seems to have been executed in Paris.

DR. RICHTER'S PAIN-EXPELLER is one of a series of specialities which are now being introduced to the British public as patent medicines, which have a considerable continental and American reputation. The Pain expeller is an attractively put-up preparation, no expense being spared, apparently, to make it go. For example, each bottle has an indiarubber stopper, and is enclosed in an elegant carton, some interesting reading matter being thrown in. Chemists are likely to have a demand for this speciality.

MESSRS. LEATH & ROSS show us the following letter lately received by them:—

"Potsdam Hadtschloss, December 20, 1887.

"Fräulein von Gadsdorff demands Messrs. Leath & Ross to send three bottles of Neuraline (remedy against toothache) to H.R.H. Princess William of Prussia, London, Buckingham Palace. The parcel is to be forwarded by royal messenger to Potsdam Hadtschloss, Germany, and must be in Buckingham Palace on Monday. Please to send the account, and address it to Baron von Mirbach, Potsdam."

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

JACKSON—BOWEN.—On November 30, at Holy Trinity Church, Brighton Road, Balacava, Victoria, Professor A. H. Jackson, B.Sc., Director of the College of Pharmacy, Melbourne, to Charlotte, eldest daughter of William Bowen, Esq.

MOSTYN—SHAW.—On January 11, at St. Clement's Church, Longsight, by the Rev. A. Noel, Thomas Edwin, son of Edwin Mostyn, of Fern House, Harpurhey, to Florence, eldest daughter of the late Thomas Shaw, wholesale druggist, Manchester.

DEATHS.

COCKERAM.—We regret to have to announce the death, at 44, of Mr. R. P. Cockeram, who for the last seven years has served in the capacity of market clerk and buyer, successively, to Hearon, Squire & Francis, wholesale druggists, 5 Coleman Street, E.C. He was apprenticed at an early age to Gadd & Sons, Exeter, and on completing his indentures engaged himself to Evans, Sons & Co., Liverpool, where by painstaking application he acquired a sound general knowledge of the wholesale drug trade. Afterwards he held a position of trust and responsibility in the employ of Parsons & Co., St. Mary Axe, until he finally assumed the duties which he continued to discharge with much zeal and ability to the time of his last illness. His death was the result of a severe attack of rheumatic gout, with which he was seized on December 22 last, and to which he succumbed on January 10. He leaves a wife and young family to mourn his loss. The deceased was a familiar figure on the Drug Exchange, where he was much respected. Rapidity of judgment, succeeded by promptness of decision, characterised all his business transactions, a feature which to strangers not unnaturally gave to him a seeming abruptness of manner.

GREEN.—On December 30, 1887, at his residence, 116 Cross Lane, Radcliffe, James Green, chemical manufacturer. Aged 60 years.

LAVERS.—On New Year's Day, Harriett, the beloved wife of Thomas Francis Lavers, of the firm of Lavers & Son, chemists, Blackheath, who passed away after six years of intense suffering, borne with great patience. Lamented by all who knew her.

STEWART.—On January 3, 1888, Mr. William Stewart, pharmaceutical chemist, of 42 High Street, Bridgnorth, Aged 73 years. A former apprentice of Mr. Stewart's sends a short reminiscence of his old master. He says:—"He was methodical, quiet, fair, upright in business; he kept first-class drugs, looked after their storage himself; he 'personally dispensed prescriptions,' advised as a chemist ought, and charged equal prices when dispensing what he judged suitable to his customers. He did no ignorant quacking; was a safe man, who readily sent a serious case to 'the doctor.' I never heard of friction between him and any member of the profession, nor knew a customer complain of him. We lads were well fed, bedded, and treated in house and shop. We were in no hurry to leave him 'when our time was out,' although holidays were to be counted on our thumbs—flower-show day and Christmas Day. But we were none the worse for that, though I grant it might have been jollier to have had a day now and then. He never preached at us, but he allowed us time for temperance meetings and Sunday school. Masters will know that these indulgences confined him more closely than needed to business. Yet the daily practice of the moral law served to train up men who have done credit to his quiet force of character, religious as well as moral. His, now, the reward of a good man; ours, one more memory of a man of many virtues, sterling worth, and not unsuccessful endeavour.—D. O. E."

TIRRELL.—On December 29, 1887, Mr. John Tirrell, chemist and druggist, Market Square, Hanley.

A COMMISSION has been appointed for the compilation of a new Austrian Military Pharmacopœia.

LIABILITY OF BLAUD'S AND OTHER PILLS TO MEDICINE STAMP DUTY.

IMPORTANT CORRESPONDENCE.

A FEW months ago an officer of the Inland Revenue informed Messrs. Macfarlan & Co. that the sale of Bland's Pills, as such, unstamped, was an infringement of the Medicine Stamp Act. Messrs. Macfarlan & Co. addressed the Board of Inland Revenue at Somerset House on the subject, and the following correspondence passed subsequently:—

"Inland Revenue,

"Somerset House, London, W.C.,

"November 5, 1887.

"Gentlemen,—The Board of Inland Revenue have had under consideration your letter of the 13th ultimo, as to the sale in Scotland of Bland's Pills, &c., unstamped.

"The Board have no doubt that the use of such labels as 'Dr. Hamilton's Pills,' 'Dr. Christison's Pills,' 'Bland's Pills,' &c., bearing, in addition, the name and address of the compounder, must, in strictness, be regarded as indicating that those medicines are held out 'as nostrums, or proprietary medicines, or as specifics,' and that, therefore, medicine stamp duty ought to be paid in respect of them.

"The Board would not be disposed, however, to favour proceedings for penalties by reason of such medicines being sold unstamped, if in the case of remedies like Dr. Hamilton's Pills and Dr. Christison's Pills, the ingredients of which they are composed were specified on the label immediately before the word 'Pills,' thus:—

Ipecac. pulv.	..	..	..	..	1/2 gr.
Ol. eucalypt.	..	..	..	..	3/4 m.
Capsici pulv.	..	..	..	..	3 gr.
Pil. galbani co. B.P.	..	..	..	..	1 gr.

or whatever the ingredients may be; but even with such a description they would come within the charging clause if held out by advertisements, handbills or otherwise, as specifics for complaints, &c.

"In the case of Bland's Pills, which are understood to be prepared in accordance with a formula appearing in the French Pharmacopœia, the Board would be willing to regard a statement to that effect on the label as negating a claim founded on proprietary right, &c., or on the assumption that the pills in question may be regarded as a nostrum or specific.

"It will, of course, be understood that the view of the Board as above indicated only extends to the use of a label printed in the manner suggested, and that in the event of the issue of any public notice or advertisement, or of any papers or handbills relating to the medicines referred to, the Board would consider it necessary to regard the matter in its purely legal aspect, and to maintain the liability of such medicines to the duty imposed by law.

"I enclose for your information extracts from the Acts of Parliament which impose and regulate the medicine stamp duties.

"I am, Gentlemen,

"Your obedient servant,

(Signed) "EDWARD BRIGHT."

"Edward Bright, Esq.,

"Inland Revenue, Somerset House, London.

"Sir,—We are obliged by your favour of the 5th instant with the extracts from the Acts of Parliament relative to the Medicine Stamp Duties therein contained.

"It appears to us that your Honourable Board does not usually claim to exercise the right to levy stamp duties on such simple and well-known medicines as Dr. Hamilton's Pills, Dr. Christison's Pills, Bland's Pills, &c., &c., unless there be something in the way in which they are sold, which will give colour to the idea that they are held out as nostrums or proprietary medicines, or as specifics. It thus becomes important to consider what is the meaning of the words 'Dr. Hamilton's,' 'Dr. Christison's,' 'Bland's,' &c., when prefixed to the word 'pills,' &c. Now the meaning of these words is simply this: they are names given by the public to well-known medicines, which both the public know and the chemists know, and the formula of which is to be found in standard

medical books. The public know what they want when they ask for 'Dr. Hamilton's Pills,' and every chemist in the country knows what pills to make up when 'Dr. Hamilton's' pills are asked for. Now these pills are sold in small quantities, very frequently in penny boxes, just as antibilious pills, 'aperient pills,' and 'steel pills' are sold in London and many parts of England. These boxes are exceedingly small, and could not bear a label large enough to contain the names of the various ingredients of which the pills are composed, and to increase the size of the box and to put on a label containing the names of the ingredients would entail an expense altogether disproportionate to the cost of the pills. This would be a great hardship to the poor, who are by far the largest purchasers of these simple and well-known medicines, and this evil would arise without producing any advantage whatever to the revenue.

"We humbly submit that your Honourable Board ought not needlessly to impose burdens upon those least able to bear them.

"It might be practicable to put on the labels of the boxes containing such pill, the words 'Pills,' 'Dr. Hamilton's,' 'Dr. Christison's,' 'Bland's.' The name being put within brackets would thus show that it referred merely to the popular name of the medicine. This would, however, cause a considerable amount of alteration on the labels now in use, and no little expense. Considering the long period during which the present condition of things has been allowed to go on by the officers of your Honourable Board, any change would necessarily create a good deal of irritation amongst a large body of respectable men.

"J. F. MACFARLAN & Co.

"17 North Bridge, Edinburgh, November 14, 1887."

"Inland Revenue, Somerset House, London, W.C.,
"November 22, 1887.

"Gentlemen,—I have laid before the Board of Inland Revenue your further letter of the 14th instant, and they have directed me to state that they are not prepared to depart from the decision conveyed by their communication of the 5th instant. The concession therein granted is the utmost that can be made.

"I am, Gentlemen, your obedient Servant,

"Messrs. J. F. Macfarlan & Co.

W. R. COUSINS."

"17 North Bridge, Edinburgh.

"November 28, 1887.

"W. R. Cousins, Esq.

"Sir,—We are obliged by your communication of the 22nd inst., and in accordance therewith have had our Bland's pill labels altered so as to avoid any infringement of the Act.

"In keeping with the terms of said communication we will have in common with other members of the trade in Scotland to destroy a large number of pill labels which the officers of your Honourable Board have hitherto allowed to be used without challenge, but there are two or three of these so much used in this country that their extinction will in many households be little short of a domestic calamity, and we venture, therefore, to ask whether to obviate this the substitution for them of labels such as are attached hereto would be objected to by your Honourable Board.

"Apologising for the trouble we have given in this matter, and awaiting your reply,

"We are, Sir,

"Your most obedient Servants,

"J. F. MACFARLAN & Co."

COMPOUND
COLOCYNTH PILLS
(Gregory).

COLOCYNTH
AND
HENBANE PILLS
(Hamilton).

APERIENT
PILLS
(Christison).

"Inland Revenue Office,

"Somerset House, London, W.C.

"December 28, 1887.

"Gentlemen,—In reply to your further letter dated the 22nd instant, I am directed by the Board of Inland Revenue to return herewith the duplicates of the following labels forwarded by you, viz.:—'Compound Colocynth Pills (Gregory),' 'Colocynth and Henbane Pills (Hamilton),' marked 'not

ble,' in so far as the liability to medicine stamp duty is dependent on the terms of the label in each case.

Not liable.

COMPOUND

COLOCYNTH

PILLS

(Gregory).

Not liable.

COLOCYNTH

AND HENBANE

PILLS

(Hamilton).

"The label for the 'Aperient Pills (Christison)' was not in duplicate. It would not, however, involve liability to medicine stamp duty.

"I am, Gentlemen, your obedient Servant,

"T. N. CRAFTS.

"Messrs. J. F. Macfarlan & Co."

TRADE-MARKS APPLIED FOR.

THE *Trade Marks Journal* publishes the following notice:—"Any person who has good grounds for objection to the registration of any of the following marks may, within two months of the date of this journal, give notice in duplicate at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1883, of opposition to such registration." The address of the Patent Office is Southampton Buildings, London, W.C.

From the "*Trade Marks Journal*," January 4, 1888.

"THE GLADSTONE PILL—A PHYSIOLOGICAL PERSUADER," and portrait of Mr. Gladstone; for pills. By A. W. Burdett, Westbourne Park Road, Bayswater, W. 62,589.

"RUBROZONE"; for disinfectants, &c. (64,226); and "Sano-line"; for fumigery (64,748). By John Lorimer, trading as Lorimer & Co., Hargrave Park Road, Junction Road, N. 64,226.

"PURE" on a diamond design; for tea and coffee. By The Ceylon Pure Produce Company, Corn Exchange Avenue, Seething Lane, E.C. 65,540.

"SEABURY'S ACCIDENT CASE," and fanciful design; for chemical substances. Class 3. By G. J. Seabury, R. J. Seabury, and J. M. Peters, trading as Seabury & Johnson, 1 Australian Avenue, E.C. 66,333.

"FOOD ASSIMILATOR" and "CONSUMPTION ERADICATOR," on devices; for medicine. By J. Thomas, trading as C. R. Trajans & Co., 54 Woodland Road, Upper Norwood, S.E. 66,364-5.

Figure of soda-water bottle floating in the sea; for aerated waters. By The Ship Canal Mineral Water Company, 153 Trafford Road, Salford. 66,556.

"CROSKELL'S FEMALE CORRECTIVE PILLS," on label; for pills. By J. Croskell, 4 Sadler Street, Durham. 66,577.

Heraldic design, containing names of several veterinary specialities for medicine chests of wood. By Day & Sons, Crewe. 66,990.

"J. A. JONES'S 'CORRECTIVE' MIXTURE FOR CHILDREN," and other wording, on label; for a mixture for children. By J. A. Jones, Clifton Street, Roath. 67,006.

"MAGNETAIRE," and signature; for magnetic apparatus for medical purposes. By Richard Lonsdale & Co., 447 Strand, W.C. 67,162.

Figure of a windmill, and designation of depositors, on elliptical label; for bleaching powders. By Hold Bros. & Shaw, Widnes. 67,203.

Monogram on a trowel; for aerated waters. By W. H. Cunningham, 40 Regent Street, South Shields. 67,338.

"MARETTES"; for chemical substances (Class 3); and for foods (Class 42). By J. Hawke, Lapford House, New Barnet. 67,532-3.

"THE BERKSHIRE ELECT CAKE POWDER," and other wording, on label; for a cake powder. By A. J. T. Pullen, Newbury. 67,779.

Figure of a card of 17 tubes of sugar-coated pills; for pills.

By A. M. Robertson, Anderston Apothecaries' Hall, Washington Street, Glasgow. 67,845.

Figure of a long-haired girl on horseback, with "For the hair," on label; for a medicated hair-wash, or lotion and a hair-wash. By S. W. Herrick and C. R. Langer, trading as the Koko-Maricopas Company, 9 Prince Teck Buildings, Earl's Court, W. 67,932-3.

"BONOLINE"; for oils (Class 4). By J. K. Field, Lombard Road, Battersea. 68,112.

From the "*Trade Marks Journal*," January 11, 1888.

"CEDROLINE," and signature of depositor; for a preparation for protecting the skin from stings or bites of insects. By T. G. Gibbons, 41 Market Street, Manchester. 64,118.

"CELERY COMPOUND," and figure of the celery plant; for a medicinal preparation. By Wells & Richardson Company, 58 Shoe Lane, E.C. 64,934.

"VICTORIA DRY PLATE DEVELOPER," and other wording on label; for a dry plate developer. By Photographic Apparatus and Chemical Company, 15 Barbican, E.C. 65,279.

Sketch showing the Duke of Wellington in a club-room speaking to three gentlemen, with wording regarding Live-long Candy; for a chemical preparation for human use. By J. C. Shenstone, late Smith & Shenstone, Colchester. 66,355.

"BRIN'S PURE OXYGEN WATER," for an aerated water. By The Brin's Oxygen Company (Limited), Connaught Chambers, Victoria Street, S.W. 66,382.

"LIQUOR ULEX DIURETICUS STANDARDISED," and figure of furze top; for a pharmaceutical preparation. By T. Christy (trading as T. Christy & Co.) and A. W. Gerrard, pharmaceutical chemists, 25 Limestone Street, E.C. 66,751.

"SKETCH'S GREEN GINGER BEER," and other wording on oval label for ginger-beer. By S. B. Sketch, Butterland, Pembroke Dock. 67,018.

"NATURE'S SOPE," on a label for perfumed soap. By W. Bolton, trading as the Health Soap Company, Bootle. 67,132.

"HUGGETT'S MEDICATED CIGARETTES"; for the same, and "Huggett's Boracic Toilet Powder"; for a toilet powder. By S. Huggett, Criterion Buildings, Upper Holloway, N. 67,212 and 67,214.

"DR. RICHTER'S DOKA LOZENGES"; for medicated lozenges (67,255), and "Dr. Richter's Agari-Pills"; for pills (67,544). By Dr. F. A. Richter, 1 Railway Place, Fenchurch Street, E.C.

"RIDGE'S FOOD"; for a food for infants and invalids. By P. J. Rumney, trading as Ridge & Co., 150 Boleyn Road, Stoke Newington, N. 67,753.

"ESSENCE OF MAMURTREN," and other wording on label; for a perfume. By A. Smith, general merchant, 30A Victoria Street, Derby. 67,767.

"LINTMOS"; for non-medicated surgical dressings. By Burroughes, Wellcome & Co., Snow Hill Buildings, E.C. 67,796.

"KASUK"; for a medicine. By Squire & Sons, 413 Oxford Street, W. 67,928.

"RYLANDS' ORIGINAL NO. 4 BOTTLE"; for glass bottles. By Dan Rylands, Stairfoot, near Barnsley. 68,097.

"INTERIONARE"; for cough mixture. By G. Gionta, confectioner, trading as Giuseppe Gionta & Co., 177 Queen Victoria Street, E.C. 68,187.

"H. THOMAS & CO'S YE HARD FACE POWDER"; for face powder, hair-wash, perfumed soap, perfumed sachets, &c. By J. R. Thomas, M.P.S., trading as H. Thomas & Co., 7 Upper St. Martin's Lane, Long Acre, W.C.

"ALIMENTUM INFANTUM," and signature of depositor; for a mixture for use as food. By H. O. Jackson, Kingston-upon-Hull. 68,746.

TRADE "SANITAS" MARK.

DISINFECTANTS(FLUIDS, POWDER, SOAPS),
NON-POISONOUS, PLEASANT, AND BEST.*Used by more than 1,000 Boards of Health and Hospitals.*

Gold Medals, Calcutta 1883-84, Paris 1885, Antwerp 1886.

THE "SANITAS" COMPANY, LIMITED,

Letchford's Buildings, Bethnal Green, London.

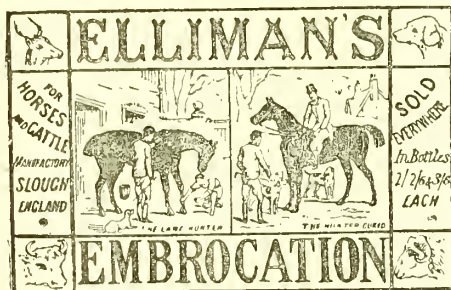
Apollinaris

"THE QUEEN OF TABLE WATERS."

CAUTION.

"The Thames is at present, and is likely to remain, an unsuitable source of water supply for the Metropolis. The pollutions to which it is necessarily exposed are of such a disgusting character as to render its use for drinking purposes undesirable."—LANCET, August, 1887. [2]

SHOW CARDS, 24 · 17 or 12 × 9,



Free to any Address.

**SILICATED CARBON
PATENT
MOVABLE
BLOCK
FILTERS.**

SEE ADVERTISEMENT, PAGE 16

DR. RICHTER'S PAIN EXPELLER

1, 1½ and 2/9, is regularly stocked by the Wholesale Houses.

USUAL TRADE TERMS.

DEPOT, FOR THE UNITED KINGDOM:

DR. RICHTER & CO., 1 Railway Place, Fenchurch St., London, E.C.**MUMFORD'S
PURE CRUSHED LINSEED**

17/- per cwt., bag included, 18/- in 28 and 56 lb., 20/- in 7 and 14 lb. parcels.
1 lb. tins, 5/- per doz. Best Quality. No Oil Extracted. Carefully
Cleaned and Ground, so as to retain the natural colour of the seed without being
heated. G. S. MUMFORD, FARRINGTON ROAD, LONDON.

WOODHALL SPA**BROMO IODINE MINERAL WATER.***The strongest known Iodine Water in the World.*

This remarkable Spa has been purchased by a Syndicate of gentlemen who have determined to make more widely known the extraordinary curative powers of this spring, which contains more Iodine and Bromine than any spring in Europe. "And, we may safely add, in any part of the World."—Dr. Cuffe, for many years late resident Physician at Woodhall Spa.

An analysis of the water having been made in November, 1886, by Professor Wanklyn, M.R.C.S., corresponding member of the Royal Bavarian Academy of Sciences, Professor of Chemistry, a very important discovery has been made, viz., the presence of Free or Elementary Iodine.

Dr. Wanklyn says—"So far as I am aware, this is the first instance in which free Iodine has been found in appreciable quantity in a natural water. For many years the Woodhall Spa has been celebrated as a valuable remedy in skin diseases. The fact that it is a solution of free Iodine is interesting in this connection, and well worthy of the attention of the medical profession."

The Woodhall Bromo-Iodine Water is now being bottled at the Spring by the Sole Agents, BROMLEY & CO., Chemists, 233 High Street, Lincoln, 5 & 6 The Grove, Buxton, and at Woodhall. All communications to be addressed to them at the Spa, Woodhall Horncastle.

**SLACK & BROWNLOW'S
CANAL
MANCHESTER
FILTERS****THE "VIKING"
ESSENCE OF BEEF
AND
PURE BEEF TEA
IN GLASS.**

The "VIKING" Essences are guaranteed perfectly pure. They are delicious to the palate, stimulating to the digestion, and can be immediately assimilated. Most beneficial in all cases of exhaustion.

Price List, Samples and Analysis from

The VIKING FOOD & ESSENCE CO., Ltd.
28 Hearn Street, London, E.C. [2]**EDITORIAL NOTES.****THE FOREIGN TRADE OF THE
UNITED KINGDOM IN 1887.**

IF our manufacturers and merchants have not learnt wisdom lately, it has certainly not been the fault of their candid friends. The reports from our consuls abroad have been filled largely with jeremiads on the unprogressiveness, the inadaptability to the requirements of local markets, and the general incapacity of our traders. At home newspapers are never tired of predicting our impending extinction as a great commercial centre, or at any rate our degradation to a sort of satellite of Germany, which seems to be generally regarded as the commercial leader of the future. But the Board of Trade returns for 1887 do not by any means corroborate the sinister views of the croakers. As yet we have no opportunity of comparing our foreign commerce in all its details with that of our principal competitors, Great Britain being the only nation which issues full particulars of her annual trade within a few days after the close of the year. But after making every allowance for the seriousness of foreign competition, it must be confessed that a total external trade worth 642,440,044*l.* is not bad for a community of only about thirty-six million inhabitants. No other country in the world, in fact, can show an annual turnover in foreign trade of 18*l.* in round figures, per head of its population, or even anything

approaching that amount. So far as value is concerned, the total of the business transacted in 1887 is considerably above that of 1886, slightly in excess of 1885, but much below that of 1884 and especially of 1883. But the weights and measures of the goods which we bought and sold cannot, of course, be given; if they could, it would probably be found that in previous years we received from abroad a much smaller quantity of wares in return for a larger sum of money; while, on the other hand, our exports, consisting mostly of wholly or partly manufactured goods, have not been sold by us to the foreigner at reductions at all equivalent to those which he has had to allow us on the raw produce sent by him to this country. Thus, even allowing for the increase in population, the amount of merchandise which we have traded with foreign countries has probably increased rather than decreased. The very considerable growth of our exports for 1887, as compared with the year preceding, is principally accounted for by the improvement in business during the closing months of the year, December especially. In the beginning of 1887 the Board of Trade returns commenced to improve, but during the summer months very little progress was made, and not until the year was well advanced did it become evident that a general wave of revival was again carrying our trade towards better times. The exports for 1887 show an advance upon the returns for 1886 in all branches, except articles of food and drink. Our exports of fish, salt, sugar, and provisions have much decreased, and this fall is but imperfectly balanced by a growth in the exports of beer and spirits, which, temperance advocates will regret to hear, show a steady improvement, particularly to Australia, India, and other British dependencies. The greatest increase in our export trade lies in machinery and metals; next in coal and other fuel; and, thirdly, in yarns and textile fabrics, such as cotton, jute, linen, silk, and wool. Our exports of drugs and chemicals have grown but slightly, viz., from 6,695,893*l.* in 1886 to 7,023,392*l.* in 1887. The chief improvement here lies in bleaching materials, medicines of all kinds, and chemical manure. Our exports of alkali, however, which are the mainstay of this section, continue to dwindle, and this, as is abundantly proved by the figures, is entirely due to the protective tariffs of several Continental countries and of the United States. There is a very satisfactory increase in our exports of painters' colours, and also in soap. Of seed oil our exports are somewhat larger than last year, but this is entirely owing to the fact that our trade with France has suddenly increased sixfold, probably on account of a change in the import duty of that country. This growth does not appear a natural one, and but for it our total trade in this section would show a reduction instead of an improvement. Re-exports of foreign and colonial produce show up well, and in this section the protective tendencies of Continental nations may be said to work to our direct advantage, for the more native industry is artificially fostered abroad, the greater becomes their dependency upon the central markets of the world, such as London and Liverpool for raw material. Our re-exports of raw cotton, for instance, have grown nearly 50 per cent. in quantity, the principal increase being with Germany and Russia. The efforts now being made to grow cotton in the Central Asian provinces of Russia may deprive us of this customer in time, but meanwhile the Liverpool cotton dealers pocket a part, at any rate, of the losses of the Manchester shippers of cotton goods to Russia. In a similar way this country holds the stock of and does the chief business in wool, caoutchouc, hemp, ivory, jute, indigo, palm oil, and other foreign products; but some large articles show a considerable falling off. Prominent among these are unrefined sugar, coffee, rice, petroleum, and tea. Of the latter article our shipments to Germany, for instance,

declined from 17,921,982 lbs. in 1886 to 8,422,763 lbs. in 1887. The figures relating to cinchona are very instructive, for while since 1882 the quantities shipped increased from 80,014 cwts. to 131,377 cwts., the values fell in the same period from 903,332*l.* to 481,636*l.*, showing the average value of the bark to have been in 1887 only a third of that which prevailed in 1882. The position is reversed in the case of gum arabic, of which the 41,554 cwts. re-exported in 1882 were worth on an average about 43*s.* 6*d.* per cwt., while the 41,958 cwts. shipped in 1887 averaged 80*s.* in value. Our re-shipments of palm oil have been the largest known for many years, but our foreign trade in petroleum is fast on the way to extinction since the Russian oil has pushed the American out of so many Continental markets.

Our imports during 1887 confirm the favourable impression of the prospects of our trade. The branches in which there has been a large increase are those of raw materials for manufactures, metals, and articles of food and drink. For our breadstuffs we have become more than ever dependent upon the foreigner, the principal increase of our trade under this heading being with the United States, while our supplies from British India show a corresponding falling off. Our trade in dead meat with the United States has much decreased, but the imports of mutton from Australia and South America are rapidly growing. Nearly all other articles of food, spices excepted, show a substantial increase. Only about one-fourth of the coffee imported here is consumed in this country, and the quantity we use becomes smaller every year, but the consumption of tea shows a corresponding increase, being now nearly 5 lbs. per head of the population, against about $\frac{1}{2}$ lb. of coffee. The bulk of our coffee imports last year came from Brazil and Central America, while in 1885 Ceylon still stood at the head of our purveyors. In the supply of tea our East Indian possessions already run China very close as regards bulk, and already surpass her in value.

Our imports of crude drugs in 1887 were worth little more than half of the declared value under this head in 1883, although the quantity, if it were recorded, would probably show no very large decrease. Unenumerated chemicals, sulphur, nitrate of soda, and saltpetre also show a material decline as compared with previous years, but they are all in excess of 1886. The imports of quicksilver have been the largest recorded for many years, but those of cinchona bark were slightly below the figures for 1885 as regards bulk, and much less in value. The value of our imports of aniline dyes shows a considerable increase; but of cochineal, madder, and indigo we have received less, while cutch and gambier have remained almost stationary. The fact that the sea-borne traffic of the world is controlled by Great Britain was never more manifest than at present; for we find that the tonnage of British ships cleared from this country to foreign ports in 1887 amounted to 23,115,412 tons, and that of foreign vessels to 7,056,024 tons only. Of the arrivals at ports of the British Isles, 19,311,107 tons were British, and 6,688,703 foreign. In 1885 the proportion of foreign to British tonnage in British ports was 143 against 406; in 1886 it was 135 against 402; and in 1887 only 137 against 424.

THE INLAND REVENUE AND THE POSSESSIVE CASE.

A CORRESPONDENCE has lately passed between a well-known firm of chemists at Edinburgh and the Board of Inland Revenue, from which it appears that the Board are inclined to support their officers in Scotland in the claim that preparations labelled as "Blaud's Pills," "Gregory's Powder," "Gregory's Pills," "Hamilton's Pills," "Christison's Pills," and other such preparations, most of them very frequently

sold in the North, are by such appellations rendered liable to medicine stamp duty. The correspondence began, we are told, in regard to a label on which only the words "Blaud's Pills" were printed; and in defending the use of this label it was pleaded that the pills were not "secret or occult"—that the formula was published in the French Codex, that they were not sold as a proprietary medicine, and, in addition, that they belonged to the same class as "Dr. Gregory's," "Professor Hamilton's," "Professor Christison's," "Dr. Thompson's," and many others which have from time immemorial been freely sold in Scotland without interference on the part of the Board's officers. The Board in reply stated that they had "no doubt that the use of such labels as 'Dr. Hamilton's Pills,' 'Dr. Christison's Pills,' 'Blaud's Pills,' &c., bearing, in addition, the name and address of the compounder, must, in strictness, be regarded as indicating that those medicines are held out 'as nostrums, or proprietary medicines, or as specifics,' and that, therefore, medicine stamp duty ought to be paid in respect of them."

The above is the important passage of their letter. They go on to say that they would not be disposed to favour prosecutions in such cases if the formula were printed on the labels before the word "pills" (in the case of Dr. Christison's or Dr. Hamilton's), or if (in the case of Blaud's Pills) a statement appeared on the label to the effect that the pills were prepared in accordance with the French Pharmacopœia. Of course such statements would not prevent the pills being rendered liable by other words on the labels, or by public notices or advertisements. After some more correspondence we understand the discussion was brought to the knowledge of the President of the Pharmaceutical Society, who visited the authorities at Somerset House, and on his suggestion labels were drawn up which the Board, after consideration, agreed to regard as not liable to stamp duty. These were worded thus:—

Compound Colocynth Pills (Gregory)	Colocynth and Henbane Pills (Hamilton)	Aperient Pills (Christison)
---	---	-----------------------------------

It seems to us that this is a very lame and unsatisfactory conclusion. The interference with legitimate trade which the Board of Inland Revenue are attempting, if they are going to claim that every title of a medicine, where a name in a possessive case is used, renders that medicine liable to medicine-stamp duty, is such that it presents an opportunity for a display of that latent combativeness which Mr. Carteighe announced last May. The Pharmaceutical Council, he said, at the annual meeting of the Society, could not take up individual grievances, could never become a trade protection society, but would act in cases which affected the interests of the whole craft. In the case raised the Board of Inland Revenue are claiming what we do not believe they could maintain. When a chemist sells Gregory's Powder, or Huxham's Tincture, Dover's Powder, or Griffiths's Mixture, he neither "hath, nor claims to have, any occult secret or art for the making or preparing the same, nor hath, nor claims to have, any exclusive right or title to the making or preparing the same." Of course he may make his Gregory's powder liable by recommending it in print for this or that complaint, but this is not the point in question just now. The Board say that by the bare title "Blaud's Pills," "Christison's Pills," "Gregory's Powder," the vendor holds out the preparation as a nostrum, or proprietary medicine, or specific. We say he does nothing of the sort; and if the case were fought out the trade could overwhelm a court with evidence that such titles are common property and in universal employment, and therefore are not in any sense proprietary, or capable of defining nostrums

(which is only Latin for proprietary). It cannot be expected that a single firm will fight this question with the Board, but if the Pharmaceutical Council will not take it up, there ought to be interest enough in the question to get it properly argued out by some outside body.

THE NATION'S DEATH ROLL.

THOSE who follow the periodical returns of the Registrar General for England and Wales cannot fail to be interested in the mass of material valuable to the statist which is presented in the annual report. In several respects the report for the year 1886 is of special value. The daily press has made the most of the marriage statistics, which are of exceptional interest this year. It appears that matrimony is gradually losing its hold on us as a nation. During the twenty years preceeding 1884 the marriage rate fluctuated between 14.0 and 16.0 per 1,000, but in 1886 it had fallen to 13.1 per 1,000 for the United Kingdom. In England and Wales during the latter year 14.1 was the rate, in Scotland it was 12.4, and in Ireland 8.4—these in all cases being the lowest recorded proportions. Concurrently with this, the birth and death rates have fallen, as also has the proportion of illegitimate births. The birth-rate for 1886 was 31.3 per 1,000, and the death-rate 19.0, taking the population at 36,709,477. Ireland, in spite of the miserable condition of its rural population, has the lowest death-rate, 17.9. England and Wales the highest, viz., 19.3. It is with the latter that we now propose to deal in some detail regarding the causes of death.

Physicians of all schools have always agreed that a common cold may be the precursor of serious complaints. Bronchitis, asthma, phthisis, and bronchial affections generally have usually their origin in a common cold, whether there is hereditary predisposition to them or not. That fact becomes more patent in these days of fogs and changeable temperature; but few imagine that one death in every five is due to diseases of this nature. The total number of deaths in 1886 was 537,276, and the proportion per million of deaths from the diseases which are more or less connected with a common cold were as follows:—

Bronchitis	114,352	Pleurisy	2,730
Phthisis	89,101	Laryngitis	2,680
Pneumonia	52,297	Sore throat, quinsy	1,124
Whooping-cough	24,077	Influenza	154
Croup	6,859	Other diseases of respiratory organs	9,921
Asthma, &c.	4,530		

To this list might be added such diseases as diphtheria and rheumatic fever, which together are the cause of fully 1 per cent. of the total number of deaths. In the case of bronchitis nearly one-half of the deaths are of children under five years (fully a half of these are under one year), but between the fifth and twenty-fifth year there is a break in the mortality, which again becomes accentuated after full manhood and womanhood are reached. Asthma, on the other hand, begins to thin the ranks of sufferers to a notable extent only at the thirty-fifth year, and increases in fatality as age advances. Phthisis carries off about one-half of its victims between their twenty-fifth and forty-fifth year, while pneumonia is especially fatal to young children and elderly people. It is a noteworthy fact that the deaths from phthisis are lower than they have ever been, the proportion being 1,718 to a million living persons. In 1880 the figure first fell below the 2,000, previous to that it had been as high as 2,602 (in 1866), but from that year there was a fairly-maintained decline. We may assume, without actual details before us, that this decreased mortality is mainly due to greater facilities for emigration and to improved treatment,

for while the mean temperature of the air has been above the average during fifteen of the twenty-seven years, the mean dryness has been the reverse.

Apart from diseases of the respiratory organs, the principal causes of death are diseases of the circulatory and nervous systems, and zymotic diseases. Cancer was the cause of 16,243 deaths (10,489 females), and is increasing alarmingly, it being now 50 per cent. more common than it was twenty years ago. Diarrhoea was again higher, while measles decreased slightly in fatality, although still considerably above the average. The deaths from scarlet fever sank to a rate lower than has been experienced since 1862, and for this reason is the subject of special comment.

During the past twenty-seven years nearly half a million deaths have occurred from scarlet fever, and the existence of the statistics regarding these deaths enables the Registrar-General to examine the relations in which the disease stands to age and sex. As to age, the statistics show that the disease rises to a maximum of mortality in the third year, when it is about 4,500 per million living, in the fourth and fifth year it is about 1,000 less, and in the sixth year it has fallen to 1,650, or thereabouts, for both sexes. After that the decrease is rapid. It also happens that up to the tenth year the male mortality is greater than the female, and after that period the reverse is the case; but further investigation by the aid of the statistics of London and Christiania hospitals proves that this is only apparent—the case mortality (that is, deaths per 1,000 of individuals attacked) is higher amongst males from the first year, although there is abundant statistical proof that females are more liable to attack. Sex, therefore, contrary to the common belief, does have an influence on the chances of recovery; but this difference is as nothing in comparison with the influence of age. The diminution of mortality is due to three causes—(1) the increased proportion of persons at each age period who have been attacked and have recovered; (2) consequent non-liability to a second attack; and (3) less risk of fatality by an attack. This inquiry proves how fallacious is the rather callous belief that when scarlet fever attacks one member of a family the rest may as well have it and be 'done with it'; whereas the longer a person lives without having scarlet fever the less is that person likely to be attacked, or to succumb if attacked.

Last week we gave particulars of the cases of death from poisoning which were registered during the year. There were altogether 609 deaths attributable to this cause, 329 of them being accidental, equivalent to 12 per 1,000,000 of living persons, 10 per 1,000,000 being the proportion of suicides. These numbers are lower than in the previous year, when there were 343 accidental and 280 suicidal cases of poisoning. The total number of suicides during the year was 2,254, or 80 per 1,000,000—a very high rate. Roughly speaking, only one of every eight suicides is due to poison.

POISONOUS PATENT MEDICINES.

THE December number of the *Chemist and Druggist of Australasia* contains some interesting reports of a round of prosecutions instituted by the Pharmacy Board of Victoria against unqualified dealers in poisons. The most notable of these were actions against storekeepers and others for selling certain patent medicines alleged to contain poisons without fully complying with the conditions laid down by law. The Victorian Poisons Act, like that of Great Britain, exempts the sale of patent medicines from the prohibitory clauses; but the way the exemption is worded is different

from that adopted in the British Act, and is worth quoting. Section 13 of the Act reads as follows:—

"This Act shall not extend to the sale of any poison when made up or compounded as a medicine according to the prescription of a legally-qualified medical practitioner, or in the form of a homœopathic medicine unless in the crude state, mother tincture, or of a greater strength than the third decimal potency; nor to the sale of patent or proprietary medicines, nor to the sale of photographic materials for the purpose of photography; nor to the sale of medicines dispensed by veterinary surgeons for animals under their treatment; nor to the sale of fly-poison papers, or packets of poisonous mixtures, save and except poisoned seed for the destruction of vermin, when duly marked as such; nor shall it extend to any sales by wholesale dealers in the ordinary course of wholesale dealing, if an order in writing, signed by the purchaser, shall be given for the supply of the same, provided that all such sales shall be entered in a book, and that the bottle or other vessel, wrapper, or cover, box, or case, immediately containing the poison be labelled as required by this Act.

It will be seen that under this clause the sale of all patent medicines is permitted to all sorts and conditions of persons, but it seems to be recognised in Victoria that vendors are required to observe the regular labelling and other conditions when selling such medicines as may contain poisons. This is the law also in Great Britain, though it is habitually disregarded by most vendors, qualified and unqualified. But it is not very clearly expressed in the Victorian Act, as the requirement that "such sales" shall be treated in such a manner may be construed as applying only to wholesale transactions. Any way, if it applies to patent medicines, it affects qualified and unqualified dealers alike, and unless the Victorian pharmacists are much more particular than those of Great Britain, it would seem as if the Pharmacy Board of that colony had taken action in these patent-medicine prosecutions rather too exclusively in the interests of the trade.

First, on November 7, they prosecuted two storekeepers in North and South Preston. Their detective had purchased at one store a bottle of Kay's essence of linseed, and at the other a bottle of chlorodyne. In both cases the bottles were labelled "Poison," but the complaint was that they did not bear the name and address of the sellers on the bottles. Mr. Blackett, the Government analyst, certified the presence of poison in each case, and the defendants only got off on the technical defence that there was no corroborative evidence that the medicines examined by Mr. Blackett were the identical articles sold by the defendants. On this ground the magistrates decided to dismiss the cases, but notice of appeal was given on behalf of the Board. At Mornington the next day a storekeeper was fined 10s. and 30s. for selling chlorodyne, the Bench remarking that he was liable to a penalty of 20l. At Sale, on November 15, Cromie, a storekeeper, was fined 5s. and costs for selling without proper precautions a bottle of Kay's essence of linseed, for which he charged 1s. 3d. Mr. Blackett said it was composed of chloroform, morphia, sugar, and other substances. McDonald, a grocer, had sold a bottle of pain-killer and a packet of "Steadman's" soothing powder, and was fined 1l. in each case. Mr. Blackett said the powder contained opium, starch, sugar, &c., and the pain-killer contained, amongst other ingredients, opium, spirits, and camphor. Another grocer, named Harkness, had sold pain-killer and Winslow's soothing syrup, and Mr. Blackett said both articles contained opium, and the vendor paid 5s. and costs in respect of each sale. At Lancefield, on November 22, a Mr. Neal had to pay 10s. and 35s. costs for selling chlorodyne, not having entered the sale in a book. A similar fine was imposed on Thomas J. Jackman in respect of a sale of pain-killer. At Geelong, on November 28, Robert Scott was

charged with having sold Kay's essence, and from the evidence it appeared that he had declined to sell a single bottle, saying he only sold wholesale. Consequently, half-a-dozen bottles were bought for 5s. 9d. The defendant got off on payment of costs, which amounted to the substantial sum of 2l. 2s., the evidence not being clear that he was present when the sale was effected. In another case Robert McCann proved an *alibi*, and he got off altogether; but Charles Rumpf, who himself sold a poisonous patent-medicine, was fined 5s., in addition to the 2l. 2s. costs.

Besides these cases there were several others concerning sales of poisons, properly so called, the reports of which present no feature of special interest. The activity of the Pharmacy Board of Victoria is worthy of all commendation, but as this body is especially entrusted with the administration of the Act in the public interest, they should be careful to show no partiality. Moreover, the enforcement of the poisons regulations in all cases where they may perhaps strictly apply, without due discretion, is not likely to promote anybody's interests—those of pharmacists least of all.

The Versailles is a city of 50,000 inhabitants, and is served with medicines by some twenty pharmacians. These gentlemen have accomplished during the past two years a feat which has seemed impossible to all other pharmacists. Our Paris correspondent has told us how rigidly advertisements are excluded from the walls of Versailles, and how exactly faithful in this and other details of their plan the subscribers to it have been. We are still in the dark as to the legal right of these twenty interested individuals to the control of all the walls and hoardings of the city in which they dwell, but suppose that has been arranged somehow. We append a translation of the Versailles agreement as follows:—

'The undersigned agree (1) to sell all pharmaceutical specialties [*i.e.* proprietary articles] at the same rate, viz. 10 per cent. discount from the marked price. When six packages are sold at a time, 15 per cent. discount may be allowed, and no more. On articles retailing at less than 1f. (10d.) only 5 centimes ($\frac{1}{2}$ d.) discount shall be allowed. (2) All advertising of specialties, pharmaceuticals, drugs, mineral waters, &c.—either through showcards, posted bills, circulars, almanacs, &c., or in any way whatsoever—shall be interdicted either in or outside of Versailles. Arrangements shall be made with the bill-posters to have all bills removed within eight days. (3) Versailles pharmacists may advertise their own specialised products, or such as they are agents for, but in all cases the maximum discount shall not exceed 10 per cent. off marked prices. (4) A committee of five shall be elected to give explanations and receive remarks or complaints respecting infractions of the present agreement. (5) The agreement shall take effect from March 28, 1886, when signed by all the Versailles pharmacists, and a copy of the covenant shall be handed to each one of the contracting parties. (6) Should unfair competition (*concurrence déloyale*) arise, either through the act of one of the signers of the agreement or some new-comer, all pharmacists promise not to take individual action, but to follow such general measures as may be decided upon at a meeting called by the committee. (7) Announcements like the following shall not be made by pharmacists:—'Reduced prices,' 'Great reduction in prices,' 'The cheapest pharmacy in town,' &c., &c. (8) Any pharmacist who shall break his word of honour to keep the foregoing covenant agrees to forfeit, upon conviction, the sum of 500f., to be paid into the Society's fund.'

* *

Looking Forward. Somebody "in outside quarters" has been writing or remarking disrespectfully concerning the great research laboratory scheme of the Pharmaceutical Society. Surely Mr. Atkins is not alluded to. He is one of the insides of the little circle which governs everything pharmaceutical, and he is "an enthusiastic admirer of the research worker and his work," and would gladly see the Pharmaceutical Society undertake such work; but he did announce, if not "in outside quarters," at least in an

ante-room, that the Society had not got the money, and could not carry out the scheme they had planned. But the Council have passed a resolution that they will have a research laboratory—a 300l. a year one instead of a 500l. a year one, as was at first intended; so that proves, according to the *Pharmaceutical Journal*, how foolish those people are, in outside quarters, who attempt to write the history of the future. It may be questioned, however, whether they can compete in folly with those very superior persons who plan out their magnificent schemes for the future, and set committees to work at them for three or four years before they seriously consider what with other people would be the preliminary inquiry—whether they have or have not got the money.

* *

Medical Employment for Ladies. In *Time* for January, Mrs. A. T. Vanderbilt, authoress of "What to Do with our Girls," has an article, giving brief but apparently correct particulars of the steps to be taken by ladies wishing to graduate into any branch of the medical profession. A special section of the article is devoted to an exposition of the legal requirements connected with the business of a chemist and druggist, which Mrs. Vanderbilt seems to regard as a specially suitable occupation for ladies. She says:—"The business of a chemist and druggist is usually considered remunerative, and as returning a higher rate of interest for the capital invested than any other trade; it is one specially adapted to the daughters of country medical men, who in many instances have acquired some practical knowledge of dispensing and of the properties of the various drugs. Several ladies have already qualified themselves as pharmaceutical chemists, and are doing a good trade. One has been established over ten years. The capital required to start in business is from 300l. upwards. Ladies who wish to embark in it can now do so, as the examinations of the Pharmaceutical Society are open to them."

* *

Research in a Muddle. Stories often get magnified in the telling, and it is seldom that we hear of the opposite; but this cannot be said of the research laboratory scheme which some United States papers have lately heralded thus cogently (we quote from the *Druggists' Bulletin*):—"We learn from *The National Druggist* that the Chemists' (Pharmacists') Assistants' Association of London has proposed the erection of a laboratory for pharmaceutical research. The association adopted the resolution with but one dissenting voice. The laboratory is not to be established by the London society, adds the *Bulletin*, but by the British Pharmaceutical Association, provided that organisation decides to adopt the recommendation of the city druggists. The estimated expense will be about \$50,000, with an annual output of \$3,000 for running expenses. The work will be of the nature of determining the best methods of isolating alkaloids, standardising galenic preparations, and similar investigations." This ought to please the assistants, but the "city druggists" may well complain of being burdened with a proposal which they never dreamed of.

* *

The Milan Pharmaceutical Congress. It will be remembered that at the last international congress of pharmacists, which took place in Brussels in July, 1885, it was decided that the next meeting should be held at Milan in the summer of 1888. M. Canizzaro, the eminent Italian chemist, who was present at the Brussels gathering, promised that the Pharmaceutical Society of Milan would undertake the organisation of the next congress. Hitherto, however, the prospects of an international meeting at Milan this year do not seem very bright. We have a communication, dated January 5, from the secretary of the Pharmaceutical Association of Florence, who says:—"I have tried to gather information in Milan on the subject of the international congress, but I am only able to tell you that until now nobody there has even so much as mentioned anything about it; from which I judge that no congress is likely to be held at all in 1888." The official authorisation of the "International Pharmacopœia," on which so many years' labour was spent, is still, therefore, in the dim and distant future, and the book itself, if it even gets authorised, will have become obsolete.

SOME DRUGGISTS' SPECIALITIES.

THIS new column has been received with great favour by our subscribers, a number of whom write in commendation of its utility, and send contributions to it. From the we make the following selections. Hints as to the putting up of specialities, such as new styles, attractive labelling, &c., also come within the scope of this column, and we invite exchange of ideas thereon.

Bloom of Roses for the Toilet, &c.

Pure carmine	1/2 oz.
Ess. white rose	3 fl. oz.
Sol. of potass. B.P.	6 fl. drachms
Water, to make	20 fl. oz.

See sec. art. Set aside for a few days, agitate occasionally, in a filter.

The above is excellent in every respect.

Cherry Tooth Paste.

Precipitated chalk	2 lbs.
Rose pink	1 lb.
Powdered orris	4 oz.
Glycerine	4 oz.
Honey	8 oz.
English oil of lavender	3ij.
Oil of cinnamon	3ss.
Oil of bergamot	3ij.

powder and sift the solids, beat well with the other ingredients, and allow to stand a month. If at that time the paste is too stiff, reduce with water only.

Ess. Jockey Club.

Ess. jasmine	4 oz.
Otto rose	1 drachm
Ess. musk	1 oz.
Ess. Tonquin	2 oz.
S. V. R.	9 oz.

Mix.

Mixture for Nervous Headache.

Attraction states that he has found the following mixture to answer well:—

Citrate of iron and quinine	3j.
Bromide of potassium	3ij.
Tincture of orange	3j.
Syrup	3v.
Water, to	3vj.

Make a mixture, of which the dose is a tablespoonful twice or thrice a day.

Toothache Cure.

Mr. R. Chapman states that he sells the following in large quantities, and that it is very successful. We may add that the preparation is known as "Carbolic Colloid," and is a favorite preparation with many druggists. A 2-drachm vial sells for 6d.

Carbolic acid (No. 1.)	3j.
Flexible colloid	3j.

Dissolve the acid by heat, and mix it with the colloid by a brisk shake. May be coloured with saffron. (Plain colloid is better than the exible.)

Directions.—A small piece on the point of a pin to be placed in the tooth and covered with a bit of dry cotton-wool.

Balsamic Cough Mixture.

"The formula given below is a little unusual," writes Regent, "but the mixture made from it I have found to be an excellent one for the tickling cough, which requires a local application as well as a cough mixture. The mucilage is excellent for this purpose."

Mucilage of acacia	3j.
Tincture of Virginian prune	3ij.
Ipecacuanha wine	3j.
Syrup of tolu	3ij.
Chloric ether (Duncan's)	3ss.
Pargoric elixir	3j.
Syrup to	3ij.

Mix.

Dose.—A teaspoonful slowly sipped when the cough troubles.

THE HOMŒOPATHIC HERESY.

THE discussion in the *Times*, initiated by Lord Grimthorpe in consequence of the trial between Mr. Kenneth Millican and the managers of the Jubilee Hospital, has called forth some very able letters on both sides, and homœopathic controversialists have had the best chance of measuring swords with their opponents which has occurred to them for years. Their most effective foe has been a writer who, under the initials "R. B. C.," only thinly veils the identity of Mr. Robert Brudenell Carter. Of course he and others on his side make the utmost of the mistakes and exaggerations of Hahnemann and his followers; the psora theory and the doctrine of potentialising by trituration are brought in with much effect. But the homœopaths might reply with force to these criticisms if they would only recognise the possibility that their "master," as they term him, was fallible. They risk their case by their unnecessary faithfulness to his memory and to each other. "R. B. C." also repeats an old charge which seriously affects chemists, and which there is no means of proving or disproving. According to current report in the drug trade, he says, "the pilules sold to old ladies do not contain a particle of the various medicaments after which they are respectively named. They are made in bulk of pure sugar, and are distributed, when finished, into bottles bearing different labels." Being challenged in regard to that assertion, he intimates first that he does not believe the alleged attenuations of the homœopaths to be possible. His argument in this respect has a special pharmaceutical interest. The answer to the inquiry, he points out, manifestly depends upon the number of portions or pieces into which a grain of solid or a drop of fluid is physically divisible. Dover's powder is instanced as perhaps the finest division of solids known to pharmacy. But "R. B. C." says that Mr. Brownen, F.C.S., having examined for him some samples of this powder, which have been long triturated, reports that the individual particles vary in magnitude from the 110th to the 600th of an inch in diameter. "The smallest particles would be those of sulphate of potash, but let us take the mean, 350th of an inch, as the average size of the opium particles; 122,500 of such particles would cover a square inch, and I should conjecture that two layers of them at this extent would weigh a grain. If so, we have 245,000 particles of opium in the grain. We add to these 99 grains of sugar of milk, and triturate the prescribed number of times. Assuming, which is a very large assumption, that the admixture of the two powders is complete, a grain of the result would contain 2,450 particles of opium. This grain is added to a further 99 grains of sugar; and each grain of the mixture should then contain 24 particles and half a particle (how is the half particle to be obtained?) of opium. Such a grain added to 99 grains more of sugar will contain enough opium particles to supply 24 grains of the result with a particle each, while the other 76 grains will be left destitute. This will be the so-called third attenuation, which is supposed to leave in the material of each globule a millionth of a grain of the medicine; but which, if the medicine can only be divided into a quarter of a million of pieces, can only furnish one globule out of four with a dose of four times the presumed quantity."

"In the case of fluids (we continue to quote from "R. B. C.") we have less definite guidance, and it is impossible to say to what extent a drop of spirit and water, holding some medicinal matter in suspension or solution, may be split up and distributed by admixture with a larger bulk. The apparently equal division of colour, which occurs when a drop of carmine solution or of blood is added to a pint or so of water, is of no value as a test, because the structure of the eye renders what, in relation to the subject before us, would be only a coarse mottling quite undistinguishable from uniformity. The colour of human blood, for example, is due to the suspension in fluid of red disc-like particles, which individually measure from the 3,000th to the 5,000th of an inch in diameter, and have an average thickness of the 10,000th of an inch. The most minute artificial division into particles of which we have any knowledge is that which exists in fatty emulsions, as naturally in milk, the white colour of which is due to suspended fat globules. Mr. Brownen tells me that the finest known division of fat in an emulsion gives particles ranging in diameter from the 20,000th to the 30,000th of an inch; but a particle of medicine of the 30,000th of an inch in dia-

meter would far more than suffice, on homœopathic principles, to medicate the combined Atlantic and Pacific Oceans. In the absence of exact knowledge we may, in the words of South, avail ourselves of the expedients by which reason supplies the want of the reports of sense; and it is obvious that the finest conceivable division of a drop of fluid must be into the molecules of which it is composed. I speak from recollection when I say that Sir William Thomson has lately endeavoured to give a notion of the probable size of the molecules of water by saying that if a drop of water were magnified to the size of the earth the individual molecules would appear to be something between cricket balls and cannon balls. Let us suppose them to be spheres 3 inches in diameter. A cubic foot would contain sixty-four of such spheres, and the earth contains approximately 4,000,000,000 of cubic feet. Hence, on the scale supposed, the molecules in a drop of water would be 256 thousand millions in number, or 256 followed by nine 0's. That is, they would be only 6,000,000 more than a quarter of a billion, and their total number would fall short of a decillion, which is expressed by unity followed by 60 0's, by no less than 49 places of figures! A division into millionths of a drop is therefore conceivable; but a division into billionths, a favourite homœopathic quantity, would require the splitting up of each molecule into four parts—that is, its separation into its constituent atoms—with corresponding loss of its identity. It must be remembered, moreover, that the possible millionth is only predicable of the drop itself, and not at all of the medication of which it is the carrier or menstruum. I think these considerations show that the supposed homœopathic divisions are unattainable, and therefore render superfluous such calculations as those of Sir James Simpson, who showed that, if a man had to take a grain of medicine divided into billionths, each of which was contained in a globule, he would have to swallow one globule every second, night and day without ceasing, for 30,000 years in order to accomplish his task."

But whether possible or not, "R. B. C." does not believe that manufacturers of homœopathic medicines attempt to accomplish the medication of their pills. "Several years ago, he says, I was in conversation with a very scrupulous and conscientious man, a chemist in a provincial town, who kept a stock of homœopathic medicines for any customers who might wish to purchase them. He told me that he had recently engaged an assistant, a qualified chemist and a member of the Pharmaceutical Society, who had been employed, before coming to him, in the business of well-known homœopathic chemists in London. On the morning of our conversation, a lady came into my informant's shop and asked for certain globules. He expressed regret that he had none left of this particular kind, but undertook to telegraph to London and to have a supply sent down by an early train. As soon as the lady left the shop, the new assistant expostulated with his employer, and assured him that where he had been there was no difference between the globules, but that they were sent from the manufacturers in bulk, and were used to refill any bottles which happened to be getting low. My informant was greatly shocked, and told me the story on account of the strong impression which it made upon his mind." He also quotes statements published in the *Medical Times* for 1853, professing to come from manufacturers of the medicines, corroborating the foregoing.

In the same issue of the *Times* as that in which "R. B. C.'s" letter appears there is also one from Mr. Ross, of the firm of Leath & Ross, replying to the accusation first made. Mr. Ross asks, "Would any homœopathic chemist who has his living to get, and whose reputation depends upon the integrity and fidelity with which he prepares his medicines, be such a fool as to jeopardise both his reputation and character by such a course as this? Besides, both the patient and medical man would soon detect the fraud, and instead of being a gainer he would be a loser by his nefarious conduct. As a homœopathic chemist, I can bear testimony to the care, both in the selection of drugs and the strict regard paid in carrying out the pharmaceutical processes necessary to the preparation of homœopathic medicines, exercised by all my brethren in the trade; and I feel sure that there is not one among them who would be guilty of such imposition, either upon their patrons in general or the medical men practising as homœopathic physicians."

In the next day's *Times* "F. G. S." shows that there is a trifling error in "R. B. C.'s" interesting calculation. The

earth (says "R. B. C.") contains approximately 4,000,000,000 cubic feet. "F. G. S." says it contains about 250,000,000,000 cubic miles, and each cubic mile contains about 130,000,000,000 cubic feet. "R. B. C." is, therefore, out in his estimate by more thousands of millions than we have room for.

"A Sceptic," who professes to be a layman, attacks what he calls the splendid audacity of the pretensions of medical authorities to science in a very clever letter, from which the following is an extract:—

"I have just opened at random 'Ringer's Handbook of Therapeutics.' It opened at nux vomica, and as that is a drug used in both schools it is interesting to learn what medical knowledge about it comes to. Ringer, be it observed, is a doctor just about as good as they make them. He has got all the pathology, and so forth, at his fingers' ends. He can tell you what happens when you inject a medicine, and cut this or the other nerve, or tie up this or the other duct. When a man or a frog dies under treatment Ringer knows which nervous centre was affected by the poison. I opened his book at page 553, right in the middle of nux vomica, and the first thing I read was this—'The tincture or extract of nux vomica has long been employed to correct constipation, habitual or temporary.' This looked like knowledge, and I went on cheerfully. Presently I read:—

"As our knowledge of the action of nux vomica in its relation to constipation is at present imperfect the results appear to be capricious. It is as well, therefore, not to be too sanguine of success, for in some cases it answers beyond all expectation, while in other, apparently similar, cases it completely fails."

"Is not this a perfectly lovely specimen of 'science'? Nux vomica is an exceedingly well-known drug, constantly in use either under its own name or as strychnia, which is its active principle. Constipation is one of the most familiar of all maladies, offering boundless facilities for the exercise of a scientific method. Ringer is one of the persons best equipped, by knowledge of pathology on one side and of drugs on the other, to apply the right drug with the unerring exactitude of science. What does it all come to? Why, just this, that the exponent of science, the master of that 'medical knowledge' so arrogantly vaunted by your correspondents, dealing with a common-place ailment and an everyday drug, knows no more what that drug will do for a given patient than the first old woman he might meet in the street. He will try it and see what happens—that is all. Why, I could do just as much for myself, at any rate, with the aid of one of the homœopathic manuals that excite the derision of lofty scientific spirits.

"However, there are weak points in every system, and as nux vomica might not be Ringer's 'strong suit,' I turned to his index in order to see what else he could do for constipation. I found no end of things recommended—aloes, belladonna, Carlsbad water, coffee, cascara, croton oil, jalap, rhubarb, senna, gualacum, magnesia, sulphate of potash (sometimes poisonous, but you can only find out by trying whether it is so or not in a given case), mercury, oranges, and ever so many more. I turned up a number of these remedies, and searched in vain for a cure for constipation. These drugs, most of them quite familiar to the old woman before mentioned, are only laxatives or purgatives. That is to say, they relieve constipation, but do not remove the condition on which it depends, any more than baling out a boat stops the leak in its bottom. Ringer does not know any cure for constipation, and he does not know, except by direct experiment upon the patient, which is the best palliative in any given case. They call this sort of thing science, and medical knowledge, and pathology, and Heaven knows how many other fine names! On the strength of this blundering guess-work they come down in thunders of indignation upon the poor homœopath who, at worst, only adds one more guess to the pile, and whose stuff, to take their account of it, is at least in no danger of turning out poisonous like their sulphate of potash. Can you conceive anything more ludicrous than this fine Ephesian rage?"

To DETECT alcohol in oil of lemons, place a little of the oil in a dry test-tube, and dust a little powdered fuchsin over the oil, then heat to boiling. If it is free from alcohol, the fuchsin remains unchanged; but if the oil contains even 0.1 per cent. of alcohol, a red edge is produced round each particle of fuchsin.

Trade Report.

Advice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., January 12.

BUSINESS has scarcely as yet assumed its normal condition, all transactions having been greatly impeded this week by the continued fog which enveloped the metropolis. The drug auctions were extremely heavy, and nine of the thirteen catalogues had to be postponed until to-morrow. The principal alterations of the week, which in no instance were very violent ones, may be summed up in a few words. Heavy chemicals, sulphate of ammonia and nitrate of soda are dearer, while soda crystals are a shade weaker on the week. As regards fine chemicals the advance in cocaine, which we reported as imminent last week, has actually commenced. But, on the other hand, quinine is momentarily lower, and quicksilver has further declined, followed, of course, by all mercurials. Glycerine is weaker, and so is citric acid. Drysalteries are mostly quiet. Shellac had a further fall in the beginning of the week, but at the close it is rallying again. Japan wax is quieter. Cocoa butter sold cheaper at the auctions. Essential oils are in many cases advancing, especially is this the case with French and Italian oils, Algerian geranium and Japanese peppermint, while menthol is also dearer. In the rug market we have to chronicle a rise in cubebs, gamboge, pécacuanha, saffron, vanilla, and good quality rhubarb, while money may be dearer shortly. Musk, senna, and Jamaica sarsaparilla are easier.

The new year has not commenced very auspiciously, so far as the public sales are concerned. On Tuesday a fog hung over the City, so dense as to prevent the proper inspection of any of the goods offered for sale; and when the shellac auctions were due to commence, the broker whose name was first on the list asked whether the buyers would, perhaps, like the sales to be postponed. This suggestion was strongly objected to by Messrs. Johnson, Rolls & Co., who thought that it was the business of the brokers rather than the buyers to decide about the postponement of the auctions. At the request of Messrs. King & Hovill a show of hands was then taken, when the majority voted for the postponement of the auctions until Tuesday, the 17th inst. Messrs. Johnson, Rolls & Co. and H. Dalton & Co., however, proceeded with their sales in spite of the wish of the majority.

The fog interfered not only with the drysaltery auctions on Tuesday but also prevented the holding of the spice sales on the day following, and these auctions were accordingly postponed until Friday, a delay which must necessarily cause much inconvenience.

ACID (CITRIC) might now be bought on the spot at a slightly lower price, say 1s. 8½d. per lb., but it is claimed that Lawes's make has sold for forward delivery at 1s. 9d. per lb.

ACID (OXALIC) very dull of sale at 4d. per lb. *Sal acetos* is nominally worth 6d. per lb.

ACID (TARTARIC) fairly steady at 1s. 6½d. to 1s. 6¾d. per lb. for foreign on the spot. *English* held at 1s. 7d.

ALOES.—Less than one-half of the quantity catalogued was reached to-day. Of *Cape* nothing was sold, holders not being able to obtain their limits; they want 25s. 6d. for good bright hard quality, rather a full price, and 21s. for dull drossy. A parcel of 60 packages *Curaçao* was partly disposed of, fair red liver, 67s. 6d.; dark, 30s. to 35s.; good *Capey*, 30s.; and ordinary brown, at 17s. per cwt. A large

number of kegs of dark hard *East India* aloes (socotrine) were offered; 4l. 7s. 6d. was refused for the best, which were bought in at 5l. 10s. per cwt. Sixteen cases Zanzibar bought in at 95s. for hard brown in skins, 75s. for dark in tins, and 85s. to 90s. for treacly aloes of very fine bright orange colour.

AMBERGRIS.—The auctions included the exceptionally large supply of 22 packages, mostly of recent import. Several tins sold—fair pale grey up to 88s. per oz., other parcels at 86s. and 80s. per oz.; also a small quantity inferior spermaceti-looking substance at 20s. per oz. A large proportion of the lots offered was imported from New Zealand.

ANISE.—Fair *Russian* seeds, dusty as usual, are limited at 21s. per cwt.

ANNATTO without demand. Several parcels seed were bought in at 3½d. for good Ceylon and West Indian. A small parcel rather dark *Java* seed is held at 2½d. per lb. Forty baskets *Pará roll* annatto were also brought forward but found no purchasers. The lots were bought in at from 1s. 6d. to 2s. per lb.; less would be taken no doubt.

ARSENIC remains very firm at 11s. 6d. per cwt. for white powder.

BAEL FRUIT.—Only five bags dull and slightly mouldy pieces changed hands at ½d. per lb.

BALSAMS.—*Canada* firm at 1s. 9d. to 1s. 10d. per lb. *Copaiba* not offering at present, none being apparently available. *Peru* without much demand, although 4s. 6d. per lb. was paid for one case of good quality. *Tolu* neglected.

BLEACHING POWDER.—The market is dull at the recent decline, and prices remain 8l. 10s. London spot, and 7l. 10s. to 7l. 12s. 6d. on the Tyne.

BUCHU.—Several parcels were shown to-day, but the demand is entirely stagnant, and only two bales round, rather discoloured, sold at 2½d. per lb. Good round but stalky were bought in at 3d., and long at 8d. to 11d. per lb.

CALUMBA.—Common qualities are still in very large supply, the drug auctions including 1,237 bags, of which about one-fourth was held over until to-morrow. The bulk of the root offered was not above medium quality, and only 252 bags were sold at 10s. and 12s. for dark, mixed-size d, wormy, and down to 5s. per cwt. for very common root.

CANELLA ALBA.—Twenty-six bales very broken, darkish quill, bought in at 25s. per cwt.; damaged at 20s. to 22s. per cwt.

CANNABIS INDICA neglected. Dull seedy tops bought in at 1½d. per lb., 13 bales green but very stalky at 3½d. per lb.

CANTHARIDES.—Very quiet. Good *Russian* flies bought in at 7s. per lb., 4s. 6d. being refused. Several lots of *Chinese* cantharides will be reached to-morrow.

CARDAMOMS.—The auctions comprised the large quantity of 239 packages, all of Ceylon growth. The assortment was a pretty good one, but, owing to the bad light in which the samples had to be inspected, valuation was difficult. The bulk of the cardamoms catalogued was offered to-day, and sold at firm prices, occasionally a shade above the rates paid at the last auctions. *Ceylon*, *Malabar*, and *Mysore* kinds realised 2s. 6d. to 2s. 7d. for fine bold pale smooth, 2s. 4d. to 2s. 5d. for bold plump yellowish, 2s. 2d. for very pale bleached long, 2s. to 2s. 1d. for smaller ditto and medium to bold heavy yellow, 1s. 9d. to 1s. 10d. for small to medium pale, 1s. to 1s. 6d. for very small pale, 1s. for ordinary shelly, 9d. for small and husky. Dull *Tellicherry* held at 7d. Seed sold at 1s. 3d. to 1s. 6d. The following figures refer to the exports of cardamoms from Ceylon from October 1 until December 15:—1887, 76,777 lbs.; 1886, 391,153 lbs.; 1885, 47,438 lbs.; 1884, 22,936 lbs.

CASSIA FISTULA.—Eleven bags rather thin *West Indian* pods sold at 18s. per cwt., 57 bags wormy *Java* bought in at 20s. per cwt.

CINCHONA.—A fairly heavy parcel *Lima* bark, rather pale, partly mossy; broken quill will not be reached until to-morrow; meanwhile one lot of ordinary quality sold at 4d. to-day; 136 scrans flat yellow *Cabesaya* of new import sold well at steady prices, viz., 2s. for sound, rather dark and

papery, 1s. 8d. to 1s. 11d. for damaged, and 11d. to 1s. 3d. for badly damaged. Ceylon reports dated December 20 state that a better feeling pervaded the Colombo market; no public sales had taken place yet, but privately a fair business was doing at better prices, and twigs, which were unsaleable before, again found buyers. The exports from Ceylon from October 1 to December 15 are given as follows:—1887, 1,803,726 lbs.; 1886, 2,954,055 lbs.; 1885, 3,855,273 lbs.; 1884, 1,685,107 lbs. The Ceylon Chamber of Commerce states that on December 19 the stock of bark in Colombo was 2,448,800 lbs., of which 1,925,827 lbs. were stem and root bark, and 522,973 lbs. branch. The receipts by rail from the interior from October 1 to November 27 were 761 tons against 1,265 tons in 1886. Official returns give the following figures as representing the total production of cinchona bark from private plantations in Java: 1886, 1,681,350 lbs. (English); 1885, 717,527 lbs.; 1884, 726,669 lbs.; 1883, 413,144 lbs.; 1882, 103,397 lbs.; 1881, 62,687 lbs.

CLOVES.—The production of cloves in Java appears to be growing in importance. Until 1885 there were practically no cloves grown on private plantations in the island, but in 1886 the production amounted to 12,342 lbs.

COCAINE.—Makers have advanced their quotations, and the lowest-priced German brands do not now offer below 21s. per oz. for bulk, and 9½d. per gramme in bottles. Other makers, however, ask rather higher rates. The reasons to which we referred in our last report render a further advance not unlikely.

COCA-LEAVES.—A few parcels common thin to barely fair dark leaves were bought in at 9d. to 1s. per lb. Good qualities do not seem plentiful.

COCOA BUTTER.—The first public sales of the year were held on Tuesday, and resulted in a decline of about 1½d. per lb. as compared with the prices obtained at the previous sales. Forty tons of *Cadbury's* brand in 2-cwt. cases were sold at 1s. 1½d. per lb. to 1s. 1¾d. per lb. The first lot brought 1s. 2d. per lb., but at the close 1s. 1¾d. per lb. was the price.

CREAM OF TARTAR tending lower, supplies being more plentiful. Firsts on the spot are now quoted at 127½.

CROTON SEED.—Fair pale seeds sold at 11s. per cwt.

CUBEBS.—At the commencement of the year our stock numbered 113 bags, but this is very firmly held, up to 27½. being privately asked for genuine berries. At the auctions 34 packages were offered, mostly of the bold grey variety. For three cases spurious berries, imported *via* Calcutta, 20½. was asked, but, no bid being forthcoming, the lot was bought in at 22½. Three bags good genuine berries, slightly stalky, imported *via* Amsterdam, sold at 27½. At Singapore, on November 28, there was no stock left, and for the last lots sold there as much as \$108 per picul, or 17½. 12s. 6d. per cwt., had been paid. Nineteen bags arrived here by the *Glenlyon*, *via* Singapore, a few days ago.

CUMIN SEED without demand, but holders appear less firm, 46s. 6d. to 47s. 6d. being named as the limit for good *Malta* seed. For 30 bags *Bombay* 32s. per cwt. was offered, while another parcel of the same variety was bought in at 37s. 6d. per cwt.

DILL SEED.—An offer of 7s. 6d. per cwt. was refused for 67 bags.

DRAGONSBLOOD.—Only a few cases offered, mostly *Socotrine*, and nothing of this was sold. Fair loose drop was bought in at 90s. per cwt.; drop mixed with dust at 63s. per cwt.

ERGOT OF RYE.—There has been no further movement since our last report, when 2s. 3d. per lb. was mentioned as the price asked for good *Spanish*. Several lots were offered for sale to-day, but they were mostly wormy or had been sifted, and little was sold. An offer of 2s. per lb. for good *Spanish* ergot was to be "submitted," but another broker bought in his lot at 2s. 9d. nominally. Seven bags small *Russian* were bought in at 2s. per lb., and it was claimed that 1s. 10d. had been refused for this lot.

GALLS.—The bulk of lots advertised for sale will not be reached until to-morrow, but a parcel of 26 bags good blue *Turkey* was disposed of at the steady price of 59s. to 60s.

per cwt. Mail advices from Shanghai, dated November 30, report transactions for forward delivery amounting to about 2,000 cases, but there is no stock, and supplies from the interior are very slow in arriving.

GAMBOGE.—Assisted by the favourable statistical position considerable private transactions have taken place, under the influence of which fair orange pipe advanced from 12½. to 14½. per cwt., which latter price was paid privately at the end of last week. As might have been expected, only a few cases were offered at the sales, but the competition for these did not at all equal the expectations. Four cases good bright clean broken pipe were bought in at 18½. It was said that some one had offered 14½. 2s. 6d. for the lot, and that 15½. was the price. One case rather dull in colour and blocky sold at 10½. 10s.

GENTIAN-ROOT remains steady. Two lots were bought in at 18s. to 20s. per cwt., but 16s. was named as the price for the first of these.

GLYCERINE.—The feeling is rather weaker, and it is probable that some of the manufacturers who still hold out for higher rates will come down to the quotations of their competitors, who offer s.g. 1.260 at 79½. to 80½. and solicit business.

GUINEA GRAINS.—Fairly good quality sold to-day at 20s. per cwt.

GUM AMMONIACUM very neglected; no sales were made. Seedy drop, partly drossy and slightly blocky, was bought in at 30s. per cwt.; dull seedy block, at 20s.; dark seedy blocky siftings, at 10s. per cwt.

GUM ARABIC.—Large auctions will be held next Thursday, meanwhile private business has been very small. At to-day's sales one case fine pale selected *Turkey* sold at 23s. per cwt.; brown glassy *East Indian* lump, at 8½. Good pale olibanum scented glassy *Aden* gum was bought in at 7½. 10s. per cwt. Seventeen cases *Cape* gum sold at 92s. 6d. for fair pale, 62s. 6d. to 69s. for yellow, somewhat dusty, 48s. for small brown, and 30s. for fair pale siftings.

GUM BENJAMIN in very large supply, especially *Siam* gum, for which the demand is necessarily restricted. A few cases very fine bold selected almonds were bought in at 25½. per cwt.; rather darker partly blocky almonds, mixed sizes, at 16½.; very common blocky and woody siftings, 8½. 17s. 6d. Good brown second *Sumatra* fairly almondy, false packed corners, sold at 9½. 10s. to 9½. 12s. 6d., and fair quality was bought in at 10½. per cwt. To-morrow some fine pale grey *Sumatra*, and several parcels *Palembang* gum, will be offered.

GUM EUPHORBIIUM.—Fifteen packages were again offered, and all sold at low prices; good clean pale partly small Mogadore drop at 28s. to 31s. per cwt., bidding commencing at 20s.; ten serons, mostly dust, at 23s. to 23s. 6d. per cwt.

GUM MYRRH.—Holders are firm, but the demand is not very lively. Good selected myrrh is held at 6½. 10s. per cwt.; fair *Aden* sorts at 95s. per cwt.; fairly clean bold siftings sold at 65s.; brown small siftings, at 38s.; dark woody pickings, also at 38s. per cwt.

GUM TRAGACANTH.—Public auctions were held on Friday last, at which 1,468 packages, mostly *Syrian*, were offered. About 450 packages, nearly all of inferior and medium quality, sold at full rates, but the finer grades were all bought in. Fair yellow seconds sold at 7½. 15s. to 8½. per cwt., pink to dull 6½. 10s. to 95s.; pickings, good to rather dusty, 6½. 2s. 6d. to 5½. 5s.; good to common thirds 7½. to 5½. 10s.; fourths 5½. 5s. to 85s. per cwt. *Hog* gum sold at 30s. to 66s., and a few packages siftings at 15s. per cwt.

HONEY.—Very little was offered at the auctions to-day, and nothing was sold, although parcels were bought in at stiff prices, viz., 45s. for good hard pale *Jamaica*, and 35s. per cwt. for liquid brown ditto. Messrs. Evans, Sons & Co., of Liverpool, telegraph us to-day that they have received advices from Chili to the effect that the honey stocks in that country are quite exhausted.

HOLARRHENA.—A 1 cwt. bag of the seeds of *Holarrhena* [*Wrightia*] *antidysenterica* was offered under this name, and bought in at 1s. 3d. per lb., no bid being made. The seeds closely resemble those of *strophanthus*, and have previously been offered for them, but they are easily distinguished from

rophanthus by the absence of the silky coating of fine hairs. The bark and seed of this *holarrhena* are official in the Indian pharmacopœia, the seeds being used as a remedy for dysentery and diarrhœa, and as an anthelmintic. A previous attempt to introduce them in this country was unsuccessful. The bark is commonly known as conessi bark.

INDIGO.—The quarterly auctions of East Indian indigo have been postponed from January 16 to January 18.

IODINE still firm at 9d. per oz.; *re-sublimed*, 13s. 6d. per lb.; *potassium iodide*, 11s. 3d. per lb.

IPCACUANHA.—Forty-six serons were included in to-day's auctions. At first prices were scarcely as high as those paid at the last sales, and a few serons sold at 4s. 7d. to 4s. 9d. for thin to fair annulated, and 4s. 2d. to 4s. 3d. for mouldy and damaged. Subsequently, however, another lot was offered, and the broker resolutely refused to accept low prices, stating that he was in possession of advices from South America warranting a considerable advance. In consequence of this attitude buyers made concessions, and an advance of 4d. to 3d. per lb. was established, 12 out of 35 packages selling at 5s. to 5s. 3d. for fair to good sound annulated, and 4s. 11d. to 5s. 1d. for mouldy to slightly damaged. Selected root realised 6s. per lb.

KAMALA very neglected. A few lots offered, but were bought in at nominal prices.

KOLA-NUTS.—One case dry slightly mouldy nuts was bought in at 1s. per lb. Another case, about 50 lbs. fine fresh nuts, dark red, sold at 1s. 1d. per lb., bidding commencing at 4d. per lb.

LOOFAHS.—Four bales of Japanese loofahs were bought in at 3s. per dozen.

MERCURIALS are quoted from 1d. to 2d. per lb. below the prices mentioned in our last report, but the fluctuations of the quicksilver market prevent makers from quoting firm.

MUSK.—The supply offered to-day was a rather extensive one, and although prices still remain very high, the holders showed some disposition to make concessions, and a decline of about 5s. was established. One tin of *Tonguin*, first pile, very fine thin-skinned small pods, but partly empty, sold at 110s. (at the last auctions 120s. was wanted for this); two others, rather bolder, but slightly damp, sold at the same price; old-fashioned first pile, small to medium, fair shape, sold at 101s. For nine packages imported *via* Hamburg, to where they had been brought by the new German-Chinese line of steamers, small to medium pods, rather damp and skinny, elicited no offer. Small hard, but genuine pile II, from the same source, sold at 60s. to 62s. Third pile, adulterated, damp, but bold and of good appearance, realised 75s.; low and badly trimmed ditto, 32s. 6d. to 33s. 6d. One caddy *Yunnan*, hard, skinny pods, was bought in at 47s. 6d. per oz. Six caddies damp Russian *Cabarline* sold at 16s. Privately more money is obtained for good quality. *Grain* sold at all sorts of figures, from 50s. for fair, down to 2s. 6d. and 3s. per oz. *Trimmings* fetched 1s. 4d. to 1s. 6d. per oz. and empty *Cabarline* skins, 4s. 4d. per oz.

NUX VOMICA.—One hundred and eight bags sea-damaged small *Calcutta* sold cheaply at 9s. to 10s. 9d. per cwt. Pale silky *Cochin*, of which 107 pockets were shown, is limited at 12s. per cwt.

OIL (CASTOR).—A fair business is reported privately at steady prices, but of the parcels offered at the auctions none were sold. For fair pale second *Calcutta* 2½d. is asked, and 2½d. for Madras seconds. On December 20 the *Calcutta* market was very firm, holders asking such high rates as to prevent any important business to Great Britain or the Colonies. The firmness has been brought about by an advance in the seed.

OILS (ESSENTIAL).—*Star anise* without much business at 7s. 4d. per lb. on the spot.—*Bergamot* is still advancing, as much as 10s. 6d. per lb. f.o.b. Reggio being quoted for the best. According to advices from Italy much higher rates are expected soon.—*Camphor* oil, 10 cases, dark in colour, sold at 2d. per lb., another parcel was bought in at 2½d. per lb.—*Cassia* oil nothing is doing privately and the recent quotation shows no change. At Macao on November 30th there was a stock of about 250 piculs. Nearly 800 piculs had been brought to the market since the beginning of the season, con-

siderably more than last year during the corresponding period. The demand had decidedly improved, but buyers appeared to be unwilling to grant the pretensions of holders.—*Cajaputh.* For a parcel of good green oil, Fisher's brand, 3s. 3d. per bottle was named as the price. Of *Cinnamon* oil several parcels were offered at the drug sales to-day, and bought in at different prices, from 10d. for inferior to 4s. per oz. (nominally) for two cases fine "Cano-wenne" oil. *Cinnamon leaf* oil without much business, at 1½d. per oz. The exports of *cinnamon* oil from Ceylon have been rather larger lately, a parcel of 12,672 oz. having left Galle for London on December 4. Fair quality oil is quoted here at 1s. 6d. per oz. The shipments of *Citronella* oil from Ceylon are still increasing; from October 1 to December 15 the figures stand as follows:—1887, 2,681,712 oz.; 1886, 1,938,944 oz.; 1885, 2,107,452 oz.; 1884, 1,217,448 oz. Our market remains quiet but steady, at ¾d. to 1½d. per oz. for native brands. Of *Eucalyptus globulus* oil, 3 cases which have been repeatedly offered for sale were again bought in at 3s. 6d. per lb. Algerian *Geranium* oil is advancing. At the auctions a parcel of Indian rose oil, probably geranium, was bought in, 4d. per oz. being named as the price. French essential oils are all firmer, owing to the reports that the flower gardens have suffered much from the cold weather which has recently prevailed in the South of France. Fine French *Lavender* is rather scarce, and more money is asked. Oil of *Lemon* prices in Italy are still advancing, and from 4s. 9d. to 6s., according to quality, may now be quoted. *Lemongrass* oil quiet at 1½d. to 1¾d. per oz. Three cases oil of *Limes* sold at 3s. 1d. to 3s. 2d. per lb. for fine sound, and 3s. for "ullage." *Otto of Rose* without alteration at the established price of 20s. 6d. per oz. f.o.b. Constantinople for leading brands. *Peppermint.*—English steady at previous rates. American (HGH) offers at 11s. 9d. on the spot, and 11s. forward. In sale 19 cases of 18 bottles each, of which the labels and wrappers were stained or lost, sold at 9s. to 9s. 9d. per lb. Japanese oil dearer, up to 6s. for fine brands. Cocking's *Menthol* crystals have been advanced to 10s. 6d. per lb. upon advices from Japan.

OIL (OLIVE) firm. *Spanish*, 36l. to 37l.; *Mogadore*, 34l. 10s. In Italy there is more business doing at higher quotations. In the Naples districts there has been a continuation of rainy and stormy weather, which is unfavourable for the gathering of the olives, and the result of the Gioja crop is still uncertain; it is evident, however, that of the other Italian Continental crops of this year only such quantities as find their way to Gallipoli will be available for export as common oil, and these oils are not likely to exceed 2,000 to 2,500 tons. With such prospects and a fair demand for export it is not at all unlikely that when speculators decide on covering themselves there will be a further advance of some importance.

OPIMUM.—Nothing doing in London. From Smyrna we hear, under date of December 29, that business had been much brisker there for some days, with fairly large sales at full prices, but at the close more weakness was shown, buyers having retired. A fall in prices was anticipated, especially in Karahissar, of which the bulk of the stock is composed. Reports from the interior state that the Smyrna agents travelling there consider the winter sowings to look very satisfactory; but the native cultivators complain that, whereas last year the sowings suffered from the drought, they are now being damaged by the excess of humidity, while there is not enough snow to protect them. The plants have already grown to a height most unusual at this season, but this precocity is a source of anxiety to the cultivators, because the plants will be unprotected during January and February, which are the coldest months.

ORANGE-PEEL.—Two cases fine red thin machine-cut from *Tripoli* sold at 1s. 6d. per lb.; dull brown *Malta* ringlets bought in at 7d. to 7½d. per lb.

ORRIS ROOT.—Several lots were catalogued for to-day's drug sales. Good pale boldish Italian root was bought in at 50s. per cwt., but much less would probably be taken. In Italy prices remain high at the late advance. Selected *Florentine* root is worth there 50s. per cwt.; second quality, 45s.; *Veronese*, from 20s. to 23s. 6d. per cwt.

PISTACHIO NUTS.—Four cases fine fresh red nuts were bought in at 1s. 6d. per lb.

QUICKSILVER.—Flat and lower since last week. The quotation is 9*l*. 17*s*. 6*d*., but less would probably be accepted by some holders. Messrs. Bennett Brothers estimate the stock of quicksilver in first hands in London at the commencement of the year at about 38,000 bottles, against 50,000 bottles twelve months ago. They say:—"The stock in London is principally held by second hands. The enormous rise that has taken place lately is due to speculation, and, as will be seen above, was not warranted by the actual state of trade. Fresh supplies now coming in, as usual, this article has again commenced to assume its normal state. The price has already fallen considerably, and the market shows a still further downward tendency. There is, therefore, no reason why the price of quicksilver should not before long be again 7*l*. 15*s*., at which it was before speculation set in." Cable advices received from China this week state that holders of quicksilver there show much anxiety to realise. In 1886, although the yield was rapidly decreasing, the Californian quicksilver mines still yielded 30,157 bottles, made up as follows:—New Almaden (J. B. Bandol), 18,000 bottles; Great Western (H. M. Newal & Co.), 1,974; New Idria (Thos. Bell & Co.), 1,406; Sulphur Banks (Parrott & Co.), 1,454; Etna (Daniel Meyer), 3,475; Napa Consolidated (Haas Brothers), 1,787; Redington (Redington & Co.), 428; Great Eastern (Henry Abbey), 817; Marbrattan (Knox & Osborn), 791; sundry mines, 25.

QUININE.—The market has again become dull, and although the English and French manufacturers have not varied their official prices, and the German makers do not quote at all, 2*s*. per oz. would buy German in bulk in second hands. A parcel of the B & S brand, to arrive from America, has been offered at 1*s*. 11*d*. per oz. At the auctions 1,411 oz. "Widmore" quinine in bulk were bought in at 2*s*. per oz., 1*s*. 9*d*. being offered; and 1,534 oz. unbleached, brand not stated, at 2*s*. per oz.

RHUBARB.—The auctions included 181 chests, of which only a small part was left over for to-morrow. The demand was not equal to the supply, but several lots of good root sold at very full prices. *Shensi* good bright bold pale coated round, of good pink fracture, brought 3*s*. per lb.; small ditto, 2*s*. 3*d*. per lb.; bold flat, partly good bright fracture, 2*s*.; medium-sized ditto, 1*s*. 9*d*.; fine small round druggists' root, 3*s*. 1*d*.; good mixed druggists' pickings, 1*s*. 2*d*.; rather dark fracture and slightly spongy, 1*s*. 9*d*. per lb. Several parcels very old wormy root were bought in. High dried, fair medium to bold, flat, pale coated brought 10*d*. to 10½*d*. per lb.

SAFFRON is still inclined to advance. Finest Valencia is now held at 55*s*. to 56*s*. per lb. Three cases saffron at the auctions were bought in at 40*s*. to 55*s*. per lb.

SARSAPARILLA in very large supply, 208 packages, equal to half our stock, being offered for sale at the auctions. The demand was languid, and the recent prices paid for *Jamaica* root were not obtainable. Sound grey *Jamaica* was bought in at 2*s*. 2*d*., 4 bales red native sold at 1*s*. 1*d*. to 1*s*. 4*d*., ordinary damp and damaged *Lima-Jamaica* 1*s*. 2*d*. to 1*s*. 3*d*., and good ditto 1*s*. 4½*d*. to 1*s*. 5*d*. Six serons dull Honduras brought 1*s*. per lb. *Mexican* offers at 5*d*. per lb. privately.

SENEGA.—Sixteen bales were offered and mostly bought in at 2*s*. 3*d*. per lb., 2*s*. 2*d*. being asked for fine bright.

SENNA.—A total supply of 509 bales, nearly the whole of which belonged to the *linnevelly* variety, was included in the catalogues. A considerable part of the supply was, however, postponed until to-morrow. What was sold was nearly all of very ordinary quality, which scarcely fetched previous rates. Four bales fine bold green leaf sold at 11*d*. per lb., and one bale good ditto at 9½*d*. per lb., but the rest was nearly all ordinary small dull greenish and thin leaf, which realised from 1¼*d*. to 2*d*. per lb.

SHELLAC.—The decline which we announced last week as having commenced has since made further progress, and before the public auctions on Tuesday standard *Second orange* (TN) had fallen, by easy stages, to 58*s*. per cwt. c.i.f. terms, December-February shipment *Button lac* did not participate in the fall to the same extent as the other varieties, its statistical position being rather better. Of the 1,919 cases catalogued for sale on Tuesday (composed of 1,432 cases shellac and 487 cases button lac) only 498 cases were

actually offered, and sold at the following prices:—*Garnet AC*, good bright free, unworked, at 45*s*. 6*d*. to 46*s*. 6*d*., finishing at 46*s*. per cwt., which is a slight improvement on the prices paid privately, but somewhat below the values at the auctions of December 13; *Button lac*, fair firsts, at 64*s*. to 65*s*. per cwt., being fairly steady; *Seconds*, ordinary, at 57*s*. to 58*s*. per cwt., a slight decline. At the close, however, the market has rallied again, and sales of TN *orange* up to 55*s*. c.i.f. (equal to 58*s*. landed) for forward shipment are reported. Mail reports from Calcutta state that after December 6 the market underwent a reaction, and the price of standard second orange receded, but subsequently the news from London came better, and quotations advanced again. The sales from December 6 to 20 were about 3,000 to 4,000 cases, mostly of low qualities. Good marks are very firm, but do not seem to meet with much inquiry, and for want of any actual business quotations are nominal.

STROPHANTHUS.—Eight bags small green seed, imported from the Cape, were bought in at the nominal price of 25*s*. per lb.

SULPHUR unaltered and very weak. *Flowers* are held at 8*s*. 6*d*. to 9*s*. 6*d*. per cwt., and *roll sulphur* at 6*s*. 6*d*. to 7*s*.

TEA.—A fair trade has been done in most sorts of tea by the dealers since our last report, and the prospect for the future appears to be good. In analysing the statistics for 1887 the total imports and deliveries for the year are curiously evenly balanced, being in each case 215,000,000 lbs. odd. Total imports of all kinds for 1887 show, as compared with 1886, a falling off of 12,000,000 lbs., more than accounted for by the heavy falling off in the exports of China tea. For the first time for many years there has been a falling off in the deliveries of tea to the extent of over 5,000,000 lbs., but this is due to the serious diminution in the export trade from the United Kingdom to the Continent, leaving deliveries for actual home consumption in the United Kingdom some 4,000,000 lbs. better than 1886. The China market has been generally easy, the fog interfering much with business in Mincing Lane, and sales going irregularly and tending downwards. One or two holders show rather more disposition to sell first crop teas under 1*s*., but finer grades are unaltered. Green teas are unchanged, but scented teas and Oolongs are lower, the former especially showing a serious fall, and being readily taken in the country. Assams are very firm, especially lower grades, with a good business passing. Sales are but moderate, but with the large quantities which must come on the market very shortly we should advise buying from hand to mouth at present. Ceylons are steady at previous rates, very fair value being obtainable from 1*s*. upwards; but teas for price are still wanted, and proportionately dear.

WAX (BEES').—There was a fairly large assortment, which sold at steady prices, good pale *Jamaica* 5*l*. 10*s*., grey and brown ditto 5*l*. 2*s*. 6*d*. Fine pale was bought in at 6*l*. per cwt. *Australian* of mixed colour sold at 5*l*. 15*s*. Brown *Madras* held at 5*l*. 10*s*. *Madagascar* bought in at 90*s*. to 93*s*. for good brown to partly pale, and fair *Mogadore* at 92*s*. per cwt.

THE DUTCH MARKET.

AMSTERDAM, January 11.

COCOA BUTTER.—On January 10 an auction of about 22 tons Van Houten's butter of cocoa was held here. All were sold, at prices running as follows:—For about 9½ tons A, 77*c*. to 77½*c*. per ½ kilo.; about 8½ tons B, 75*c*. to 76*c*. per ½ kilo.; about 4 tons C, 75*c*. to 75½*c*. per ½ kilo., or about 1*s*. 1½*d*. to 1*s*. 2*d*. per lb.

CUBEES.—About 600 lb. genuine, rather stalky, changed hands at 3.25*f*. per ½ kilo. (= 26*f*. per cwt.); also a few bales spurious berries at 2.80*f*. per ½ kilo. The latest news about the 1888 crop from Java is that it will yield a smaller quantity than last year, and that Singapore has already given high buying orders. Nothing certain can, however, be told as yet, as the crop is merely beginning now. Four bales *cultivated* cubees, just arrived here, show a very fine quality. It is rumoured that some coffee-planters, who a few years ago tried to cultivate cubees, have been successful, and are harvesting small parcels this year for the first time, but no influence will thereby be exercised on the market, as the shipments of that first crop will certainly not be important.

FOREIGN TRADE IN DRUGS AND CHEMICALS.

IMPORTS		Dec., 1885	Dec., 1886	Dec., 1887	Year 1882	Year 1883	Year 1884	Year 1885	Year 1886	Year 1887
Drugs unenumerated ..	value £	63,081	61,267	72,653	840,800	1,135,033	789,224	788,882	670,525	653,440
Chemical manufactures and products, unenumerated ..	"	120,953	104,084	119,718	1,518,723	1,544,694	1,502,668	1,351,777	1,284,275	1,316,853
Chemicals & dyestuffs, unenumerated ..	"	2,40,020	152,672	214,106	2,162,598	2,487,615	2,328,740	2,384,313	2,121,180	2,005,020
Oil not enumerated ..	"	112,539	111,641	118,851	1,274,827	1,337,243	1,376,508	1,281,211	1,137,964	1,184,481
Alli ..	.. cwt.	3,249	4,330	7,618	67,029	60,239	66,989	63,641	78,797	64,172
..	.. value £	3,142	3,246	4,605	87,901	81,641	70,201	53,699	55,602	47,809
Bristone ..	.. cwt.	47,835	39,985	48,419	945,561	877,646	759,398	726,048	636,596	661,158
..	.. value £	11,459	9,885	12,307	292,462	241,026	193,577	184,578	157,917	157,188
Nitrate of soda ..	.. cwt.	83,325	197,049	136,124	1,915,138	2,049,270	2,030,944	2,247,685	1,497,725	1,736,892
..	.. value £	42,577	89,277	59,617	1,270,352	1,168,088	979,261	1,114,982	744,513	832,541
.. of potash ..	.. cwt.	40,244	24,057	36,101	322,232	284,466	333,756	324,406	271,322	303,918
..	.. value £	33,377	20,979	30,059	351,319	285,158	306,133	272,765	240,486	251,526
Quicksilver ..	.. lbs.	127,420	30,000	165,000	3,444,065	4,088,982	4,497,748	4,136,519	4,422,478	4,590,907
..	.. value £	10,425	2,875	23,880	279,291	299,689	333,918	326,959	369,779	439,208
Cinchona bark ..	.. cwt.	19,467	16,503	10,141	138,763	117,325	103,957	129,606	145,519	143,833
..	.. value £	128,878	78,354	44,480	1,781,482	1,429,261	906,954	885,241	773,643	665,457
Gum Arabic ..	.. cwt.	10,053	3,259	7,833	115,936	80,577	57,493	93,106	75,399	46,443
..	.. value £	38,137	16,382	34,420	252,475	179,803	173,714	324,687	294,683	214,150
L., seed, shell, stick, and dye ..	.. cwt.	5,938	8,594	11,508	113,378	115,309	112,987	119,915	107,307	114,685
..	.. value £	17,485	24,500	32,250	514,120	490,274	464,185	394,312	306,075	299,114
Cinnamon ..	.. lbs.	110,554	137,574	66,110	1,835,039	1,712,770	1,967,744	1,614,504	1,752,233	1,109,973
..	.. value £	4,467	4,414	2,346	1,035,091	97,190	86,003	59,281	58,909	44,436
Caper ..	.. cwt.	638	7,286	575	25,485	38,112	56,293	82,775	77,337	75,157
..	.. value £	742	6,525	337	64,409	100,314	124,622	156,172	134,979	141,859
Pepper ..	.. lbs.	2,188,598	2,493,189	2,099,974	24,867,892	317,000,361	27,970,487	31,657,607	28,265,739	29,811,852
..	.. value £	74,125	72,390	72,161	584,543	847,024	827,003	970,521	870,808	1,021,991
.. (for tanners' or dyers' use) ..	.. cwt.	17,113	13,851	10,882	271,527	365,346	430,794	349,629	390,793	346,583
..	.. value £	5,586	3,449	3,207	126,989	181,256	195,208	144,207	173,066	147,104
..	..	19,099	19,365	23,300			275,686	239,216	247,293	282,332
..	..	17,963	27,523	23,240	414,685	383,584	244,435	243,882	259,795	254,565
..	..	87	37	662			33,734	3,721	1,623	5,913
..	.. cwt.	1,606	1,517	1,879	24,934	21,144	14,100	13,930	14,710	9,961
..	.. value £	9,288	9,409	11,975	244,894	151,438	80,100	83,640	94,285	61,987
..	.. tons	1,750	2,348	3,541	30,164	26,803	32,215	26,258	28,369	27,258
..	.. value £	39,332	52,213	86,827	699,040	709,579	820,402	502,389	654,438	658,364
..	.. cwt.	6,374	4,983	4,190	95,488	100,713	104,432	94,566	84,754	76,698
..	.. value £	150,799	109,401	105,013	2,610,003	2,467,083	2,484,012	2,133,246	1,890,965	1,673,475
..	.. cwt.	2,311	2,791	1,495	23,162	21,574	23,208	40,829	21,325	19,397
..	.. value £	3,833	2,846	2,037	33,050	28,197	31,070	45,021	26,710	24,207
..	.. cwt.	19,826	10,621	36,969	136,087	210,874	245,695	185,971	156,667	183,766
..	.. value £	26,324	14,219	50,151	214,236	365,716	398,488	276,841	214,211	251,989
..	.. tons	2,062	1,156	767	23,190	30,955	17,201	24,223	20,692	20,756
..	.. value £	82,768	42,001	23,229	937,601	1,193,197	715,762	979,749	790,788	757,040
..	.. cwt.	70,803	99,044	85,457	801,545	743,512	825,822	838,481	993,091	966,536
..	.. value £	87,969	107,624	80,233	1,220,817	1,304,385	1,385,345	1,209,722	1,038,208	941,822
..	.. gals.	8,267,745	9,514,351	7,106,278	59,135,384	70,185,663	52,808,436	73,889,787	71,028,962	77,406,062
..	.. value £	261,510	272,578	186,306	1,704,753	2,156,235	1,705,773	2,284,510	2,079,406	2,105,146
..	.. tons	1,646	1,185	2,544	14,620	10,513	12,543	13,029	16,327	15,609
..	.. value £	44,308	27,822	61,721	478,208	355,855	384,509	367,902	396,322	375,932
..	.. cwt.	22,747	39,940	35,167	357,818	300,138	462,134	308,442	294,914	359,202
..	.. value £	29,401	52,052	46,870	530,085	552,902	559,972	387,986	392,259	472,016
EXPORTS										
British and Irish produce—										
Drugs and medicinal preparations, unenumerated ..	value £	82,572	72,648	82,530	935,293	922,649	892,046	842,725	814,213	864,768
Sundry chemicals ..	"	342,938	333,867	402,492	4,307,046	4,262,281	4,105,100	3,672,567	3,590,683	3,826,469
Painters' colours and materials ..	"	88,233	100,285	103,665	1,340,472	1,277,913	1,293,578	1,222,888	1,266,103	1,340,376
Alkali ..	.. cwt.	510,254	504,318	620,535	6,735,800	6,947,000	6,567,326	6,681,800	6,242,800	6,163,684
..	.. value £	154,491	143,266	165,450	2,067,806	2,124,962	2,090,573	1,955,790	1,788,078	1,743,599
Bleaching materials ..	.. cwt.	127,305	121,687	142,563	1,601,100	1,600,600	1,611,698	1,507,600	1,550,400	1,577,661
..	.. value £	41,965	43,453	53,887	340,303	480,278	681,797	507,080	550,491	593,556
Seed oil ..	.. tons	4,693	5,723	7,303	14,041,900*	20,154,700*	16,050,200*	66,295†	70,676†	75,058
..	.. value £	105,135	119,086	152,639	1,444,071	1,863,520	1,465,935	1,534,747	1,502,346	1,567,664
Soap ..	.. cwt.	32,662	36,228	36,935	409,437	391,788	476,721	402,112	426,904	451,961
..	.. value £	39,629	39,073	36,939	458,477	449,804	547,854	472,438	446,710	451,246
Foreign and Colonial merchandise—										
Chemicals, unenumerated ..	"	17,012	12,030	53,167	217,668	309,829	226,483	241,715	149,078	283,625
Cinchona bark ..	.. cwt.	12,528	16,522	7,021	80,014	69,371	102,853	112,440	117,994	131,377
..	.. value £	73,026	73,376	22,398	903,332	555,678	679,336	621,411	547,819	481,636
Coccolineal ..	.. cwt.	1,222	803	782	15,508	13,420	11,252	12,144	11,301	8,113
..	.. value £	8,334	5,520	4,704	137,106	83,103	64,166	81,144	76,749	51,713
Cutch and gambier ..	.. tons	512	766	534	11,218	11,385	10,972	8,981	10,192	9,620
..	.. value £	11,978	17,445	15,088	274,899	319,424	292,420	206,161	255,145	251,818
Gum Arabic ..	.. cwt.	6,450	2,492	3,767	41,554	51,411	39,236	51,858	43,288	41,968
..	.. value £	24,044	9,894	15,197	90,535	127,618	128,263	186,591	174,086	168,012
Indigo ..	.. cwt.	2,244	2,187	1,712	66,617	67,830	70,768	71,464	53,959	53,085
..	.. value £	46,832	45,716	35,800	1,774,809	1,677,134	1,708,080	1,536,017	1,170,242	1,179,879
Lac, seed, shell, stick, and dye ..	.. cwt.	7,204	4,779	4,850	61,737	72,336	62,526	73,152	71,949	67,574
..	.. value £	23,784	13,033	13,687	295,629	301,782	238,239	240,960	207,758	179,379
Cocoa-nut oil ..	.. cwt.	5,450	5,011	5,545	134,568	184,492	168,530	113,171	98,450	84,712
..	.. value £	8,086	7,485	8,440	205,688	321,521	274,767	168,692	138,270	117,287
Olive oil ..	.. tons	188	143	197	3,657	4,495	2,203	2,877	2,510	2,769
..	.. value £	8,382	6,856	8,412	166,309	201,356	106,869	132,913	110,516	114,643
Palm oil ..	.. cwt.	31,129	56,038	29,399	428,139	356,538	361,027	388,885	489,084	517,169
..	.. value £	38,317	59,368	28,955	642,216	614,771	616,956	547,127	511,518	508,734
Petroleum oil ..	.. gals.	56,233	45,506	59,780	822,125	771,337	786,545	1,078,719	575,092	472,000
..	.. value £	1,932	2,280	2,700	37,965	39,923	35,276	37,859	25,764	20,971
Quicksilver ..	.. lbs.	288,870	289,341	171,053	3,031,784	3,674,789	3,936,881	3,661,663	4,956,020	4,685,678
..	.. value £	23,071	25,558	20,855	242,762	272,030	285,985	287,168	414,670	439,246
Nitrate of potash ..	.. cwt.	7,903	231	5,325	22,081	33,027	29,801	39,223	24,575	32,856
..	.. value £	6,197	232	4,616	25,583	33,714	28,297	31,506	21,146	28,924
Cinnamon ..	.. lbs.	180,940	153,095	149,030	1,510,483	1,608,046	1,645,639	1,521,463	1,409,937	1,222,500
..	.. value £	7,664	5,769	6,044	82,558	78,978	71,734	56,574	50,905	46,330
Pepper ..	.. lbs.	1,757,969	1,407,969	998,200	19,361,569	19,667,206	21,365,429	21,691,985	20,109,944	20,615,400
..	.. value £	59,877	47,183	31,137	450,443	535,624	642,172	689,227	638,128	662,921

* Gallons.

† Tons.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish.

Write on one side of the paper only; write early; and devote a separate sheet of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formula consult the last volume, if you have it.

Letters, queries, &c., not noticed in this issue will, if possible, be attended to next week.

Maintaining the Pharmacy Act.

SIR,—I cordially endorse the letter of Mr. H. J. Deacon in your last number. But, as the representative society of our trade is wasting its (query—our?) money on curricula, research laboratories, and buildings, instead of imitating the medical authorities and devoting its attention to the just interests of the public and ourselves, could we not force its hand and take up the matter ourselves? If a couple of hundred chemists subscribed a guinea apiece, and chose a committee to act, could not the question be tried? I am not aware if the law requires that the initiative be taken by our lethargic Council. I enclose my card, and am, sir,

Your obedient servant,

AN ASSOCIATE OF THE
PHARMACEUTICAL SOCIETY. (229/72.)

[Unfortunately it is the case that only the Pharmaceutical Council can prosecute under the 15th section of the Pharmacy Act.]

Isinglass and Gelatine.

SIR,—A few weeks ago you gave me a hint regarding the microscopic characters of isinglass and gelatine. I have since examined both substances microscopically, and as I can find nothing in books regarding the subject, perhaps you will kindly give this publicity. The following is what I have observed:—

Isinglass under the microscope shows a distinctly granulated or cellular formation, which is very marked if dark ground illumination be employed; it polarises well, showing bright, well-defined patches of colour.

Gelatine.—No structure is discernible, the appearance being that of a transparent jelly in which a great number of minute specks are visible (bright by dark ground illumination). With the polariscope these specks show a distinct cross, from which I infer that it is starch in very small globules. I tried tincture of iodine with both, but without any result. Gelatine polarises, showing specks of colour, owing apparently to the varying thickness.

For examination I soaked each in cold water until quite soft, and then pressed between thin glass.

J. S. (100/42.)

A Chemical Ink.

SIR,—Noticing a remark in your last concerning a blue-black ink, I beg to inform your correspondent that a really good and cheap ink may be made thus:—

Aniline black "B"	..	..	..	..	2 oz.
Gum arabic	..	..	..	..	2 "
Acetic acid	..	..	..	..	2 "
Water	..	..	..	..	1 gallon

The aniline colour is well known in the market, and costs about 4s. 6d. per lb.

Yours truly,

ATRAMENT. (233/16.)

Metallic Contamination of Extracts.

SIR,—A few days ago I was mixing 8 oz. of ext. helladon with $\frac{1}{2}$ lb. of glycerine, and was surprised to find the steel spatula I used coated with copper to the extent of about four square inches. I do not suppose the amount of copper in the extract to be poisonous, but such a contamination should not exist.

In Solazzi juice we constantly find copper turnings. On one occasion I extracted 20 grains of copper from 2 lbs. of the juice, when boiling it down for sauce. I remember, also, a serious injury to the throat from a sharp piece of copper which was in a piece of liquorice.

Yours truly,
HEDER.

[This is a matter to which more attention ought to be paid. It was pointed out by Mr. Rutherford Hill fully three years ago that many extracts and concentrated preparations contain copper, which he found to be due to the use of copper evaporating vessels. The paper in which these facts were brought forward was read at the Hastings Pharmaceutical Conference, 1884. Recently the matter has been discussed by foreign pharmacists, and all agree that copper vessels should not be used. In Germany they are prohibited by law.]

Art Hints Wanted.

SIR,—I intend to have my shop re-painted at an early date, and invite suggestions from your readers as to the best colour to use on the walls inside. I have tried a salmon colour, also mauve, but am not pleased with either. I should be pleased to hear from brother-pharmacists on this question. Also, for the outside of the shop. Black and gold I suppose all agree in voting the best.

Yours, &c.,
EPHEMERA. (232/71.)

Cherry Blossom.

SIR,—May I offer my opinion, for the benefit of your correspondent asking about cherry blossom, that it contains nitrobenzol, otherwise mirbane, and to this it owes its wonderfully lasting aroma, I having known a handkerchief to smell of it after three good washes. The following formula is very good, but I think, though I have not tried it yet, that a closer imitation would result from the use of mirbane in suitable proportions instead of almonds:—

	Parts
Ess. peach-blossom	840
" violet	140
" bitter almonds (1 to 9)	20

Peach blossom is made as follows:—

	Parts:
Ext. orange-flower pomade	400
" jasmim	100
Ess. bitter almonds (1 to 9)	30
" balsam peru (1 to 9)	20
Oil lemon	20
Rect. spirit	430

Yours truly,

January 6.

ALF. (203/16.)

Action of Arsenic on Horses.

SIR,—In your number of December 31 you state, in reply to an inquiry of "T. P. R.", "Sulphur is not poisonous unless it contains arsenic, which at one time was a common impurity. We should attribute the poisonous effect on horses to arsenic." If not too much trouble to yourself it would be interesting to me, and doubtless to many of your other readers, to hear what doses of sulphur have been given in the case to which you allude. The usual dose in veterinary practice is about 1 oz., and unless that quantity was greatly exceeded I scarcely think the amount of arsenic likely to occur as an impurity would prove injurious to any horse. Veterinary works give the minimum dose of arsenic as 2 grains, to be gradually increased to 20 grains; whilst 5 drachms 1 scruple are stated to have been taken by a horse without any injury resulting, and in another case 1, 4, 3, 2,

drachms were given on successive days, and then the horse did not die till the ninth day, after the last-mentioned dose. Sulphur has, on the other hand, caused great injury when given in very large quantities to horses, and I should therefore be glad to hear any further particulars you can favour us with in respect to the case now under discussion.

Yours, &c.,

42 Castle Street, W.

EDWARD STOREY.

[Perhaps "T. P. R." will give the information required. It is quite as Mr. Storey states, that large doses of arsenic have been given to horses without producing fatal results, but small doses, such as may be found in impure sulphur, are much more hurtful. Percivall, after giving a horse 20 grains of arsenic per day, followed it up by 380 grains on the seventeenth day, without apparent physiological results. "But," adds Finlay Dun, "although such large doses sometimes have little effect, much smaller doses occasionally act with greater violence." Cases are quoted in proof of this. Ed. C. & D.]

Hospital Prescriptions.

SIR,—A former inmate of the Brompton Consumption Hospital on leaving brought a bottle of medicine away with him. Some few months have elapsed, his cough has returned, and he is anxious to obtain more of the medicine. I have twice written to the secretary of the hospital, enclosing a stamped envelope, giving him reference facts to the case and asking if either the medicine or the prescription could be obtained for the patient, who feels the need of it sadly. I have had no reply. Can you tell me how I can assist the patient further? I am, sir, yours truly,

January 7. G. B. (25/133.)

[Perhaps some chemist with special experience of hospitals can suggest what course should be taken.]

Some Chemists I Have Met.

SIR,—I do not claim in this note to have had more experience of chemists, or to have met with more phases of their peculiarities, than my fellow-chemists—indeed, I have not seen anything phenomenal in that class of society, and yet I have often been struck and amused with the peculiar traits which have shown themselves in some chemists.

In the first place, let me say that I am not one of those high and mighty ones who, by a favourable turn in the wheel of fortune, have become almost like hereditary legislators for the weal or woe of pharmacy, so tenaciously do they hold to their posts. Nor am I, on the other hand, a pessimist in pharmaceutical politics—one of those people who tell all their friends that were they to again have the chance of choosing a trade the chemist's would be the last they would think of. Rather would I say that, seeing that it was deliberate choice, "I mean to make the best of it," and persist in regarding that "best" as by no means a bad affair.

My object in writing this note was to tell what I have seen of the different dispositions of the British chemist. To explain this I mean to speak of two or three kinds of chemists I have met. First, then, let me mention the professional chemist. By this I do not mean he who has made himself a master in his science, and who relies on his scientific training for his support. No, I mean the "man of letters"—the M.P.S. the A.P.S., and the R.C.D. (London). (The latter is a title I have met but once, and that was at the foot of a quacking and bumptious advertisement as I remember seeing. I forget the gentleman's name, but that does not matter.) These gentlemen talk largely of the "profession" (I beg their pardon, "the" profession), and I notice that they are ever on the look-out for something to send to the papers, not forgetting to put their names and titles (!) at the end of their letters. I need scarcely say that many of them are supporters of that heaven-sent scheme of compulsory education which some of our "Square" friends have hatched and hashed. *Cela va sans dire*. But in this case charity beginneth not at home, as it has been my experience that those who are the loudest in the advocacy of the "curriculum" are the quietest and most silent when it comes to their turn for giving their assistants a chance to voluntarily carry out the idea. Then these gentlemen (some of them) say, like the Pharisee of old, "We thank Heaven we are not

as these other men are." (In this case not only do they include the "publican" of the present, but the grocer, confectioner, and tallow-chandler.) Yet, after this pious and lofty expression, offer them a licence to sell wine at prices which "cut" the publican or wine merchant, or candles under the grocer's figure or the Chandler's, and then—what? Of course they reject all such base trading, an outsider would conclude. We know better, though.

However, we will leave them alone in their glory. They remind me of the Irishman who was reproached by his companions because he let his wife beat him. "Well," said he; "what thin? It plazes her, and it don't hurt me."

Then we have the nervous chemist. Truly his lot is not a happy one. Daring to do nothing himself, he is almost equally successful in preventing the work of others. He it is who comes and asks a busy man questions, relevant or irrelevant—generally the latter. A prescription is to him a burden; and should it contain a poisonous ingredient it becomes a positive dread by day and nightmare by night. He will have everything checked—and sometimes completely checks the work, too. For instance, I once heard of a chemist who was about to start on a journey—of pleasure. It was within ten minutes of the time at which his train was due, and he was at the shop door, when a prescription came in containing half-a-drachm of acid, hydrocyan. dil. B.P. Now he had in his employment a Major man and a junior. Yet he fidgeted about, and waited until the prussic acid was in the bottle, only to find that he was left out, the train having gone; and he only got his deserts.

The worst of this nervous chemist is that nothing can please him. The counter may glisten with polish, the bottles be at their brightest, and everything at its best, and yet he is not satisfied. He is like the old lady who, on coming one morning into a room which had been really well dusted, detected dust everywhere, to the great astonishment of Mary Ann. It turned out, however, that though there certainly was dust to be seen, it was on the glasses of the old lady's spectacles.

Many other types I could wish to mention. The chemist who is a "martinet," the one who is "not above my trade," you know, my boy (he is generally much below it), and the "tipping chemist" (a type I have rarely met, though). But let me mention, in conclusion, the "good chemist." I am glad to say I have met him. He has been an assistant once (many chemists might never have gone through that stage), and he remembers it. He makes allowances for the foibles and weaknesses of others while keeping a strict look-out on business. He is ready to help, and growls not at a fault displayed by one who never knew the way to overcome or avoid it. May his shadow never grow less! He gets served best in the long run, and has the satisfaction of knowing that the service rendered is given voluntarily, and is not exacted. He is not given to moaning over his fate and waiting in expectation until "the Society" do for him what he can do for himself—establish himself and his business in the favourable opinion of his neighbours. That such a man has immeasurable advantages over his *confrère* with much profession but little business tact is not only the opinion of practical men, but is demonstrated time after time in the measure of success attained by each in their business careers. That the snobbishness and the pandering to "big guns" which is ever entailed by the passion for thinking one's self better than one really is may become an unknown quantity among the trade is the earnest prayer of Yours truly,

H. R.

DISPENSING NOTES.

[The opinion of practical readers is invited on subjects discussed under this heading.]

Iodides and Spirit of Nitrous Ether.

J. E. Vause (229/53) asks:—"How should a mixture containing iodide of sodium and sp. æth. nit. be sent out—brown or white, as it quickly liberates iodine. Should the sp. æth. nit. be neutralised or not?"

[Questions similar to this have been previously dealt with, and we may repeat that it is not sufficient to render the spirit neutral; it should be distinctly alkaline. The spirit decom-

poses more rapidly in aqueous mixture than it does alone, and if it is desired that the iodide should not be decomposed, there must be free alkali present to combine with the nitrous acid which is liberated. The mixture should preferably be sent out colourless. At least 2 grains of bicarbonate of potash are required for each drachm of pharmacopœial spirit of nitrous ether.]

A Bottle Question.

What bottle should a mixture with a two-tablespoonful dose (say 8 oz.) be sent out in—an 8-oz. tablespoonful, or a $\frac{1}{4}$ part bottle?

J. E. VAUSE. (229/53.)

Iron and Saccharin.

SIR,—Having prepared "Elixir of Saccharin" according to Martindale's form, I had occasion to add some to a mixture of tr. ferri perchlor. and aqua, when I was surprised to find a cloudy reddish precipitate at once form. This I attributed to the excess of alkali which I afterwards found Martindale's elixir contained; but having prepared an exactly neutral solution, I found the same precipitate occur. The precipitates dissolved again on shaking in both instances.

Can you explain the nature of this reaction; if so, you will oblige,

Yours truly,

AMIDE. (227/13.)

[The precipitate is due to double decomposition between the soda salt of saccharin and the ferric chloride (this is one of the tests for saccharin), but it does not occur if an alcoholic solution of saccharin is used. The precipitate is ferric ortho-sulphamine benzoate.]

Salicylates and Spt. of Nitrous Ether.

SIR,—I shall be pleased to have your opinion of the following prescription. At first the mixture is colourless, but colour is gradually developed—together with peculiar smell and taste—until after forty-eight hours it has the appearance of vin. ferri:—

Sod. salicyl.	..	..	..	..	3j.
Tr. strophanth. (B. and W.)	..	..	..	..	℥xx.
Glycerini	..	..	..	..	℥ss.
Sp. chlorof.	..	..	..	..	3ss.
Sp. æth. nit.	..	..	..	..	5iss.
Aq. menth. pip. ad	..	..	..	..	℥v.
Ft. mist.					

Yours truly,

E. M. B. (229/21.)

[The change is most probably due in the first instance to the decomposition of nitrous ether with the liberation of the nitrous radicle, which, taking the place of a hydrogen atom in a little of the salicylate, forms a nitro-salicylate:—

Salicylic acid.	Nitro-salicylic acid.
$C_6H_5HO_2$.	$C_6H_4(NO_2)O_2$.

The formation of nitro-salicylic acid is accompanied by the production of red compounds, and the nitro-salicylates also are of a yellow or red colour.]

A Glycyrrhizin Precipitate.

SIR,—Is the copious sediment in the following due to liquorice in chlorodyne; if not, to what; and how can it be avoided?—

Chlorodyni	..	..	..	..	ij.
Tinct. senega	..	..	..	..	3ij.
Liq. ammon. ac.	..	..	..	..	5ij.
Oxy mel scillae ad	..	..	..	..	3ij.

Yours truly,

EXETER. (123/8.)

[Glycyrrhizin will certainly be precipitated in the mixture, as well as the ordinary sediment from the senega. The mixture should be filtered.]

A Chemical Change.

SIR,—What change occurs, and what is formed in mixing the following:—

Liq. plumb. subace ^t.	..	..	..	..	℥i.
Sp. terebinthinæ	..	..	..	..	℥j.
Camphor	..	..	..	..	℥j.

Yours truly,

G. W. KENDALL

[The lead combines with the resin in the turpentine, forming an insoluble resin soap.]

Pernanganate of Potash in Pills.

SIR,—I shall be obliged to have the opinion of some of your correspondents as to the best way of preparing the following pills:—

Potass. permang.	..	..	..	..	gr. xxiv.
Pil. aloes Socot.	..	..	..	..	gr. xxxvj.
Misce et divide in pil. xij.					

On working the pil. aloes with the potass. permang., previously powdered, to a mass, I found great heat generated, with sparks which resembled electricity, accompanied with a crackling sound, and what was previously a ductile mass was converted into a dry powder. What is the cause? I afterwards rubbed the pulv. potass. permang. with a little ung. resinæ in lieu of the conf. roseæ, and afterwards added the other ingredients of the pil. aloes Socot., when a very good mass resulted. Was I justified in doing this? An answer in your next issue will oblige.

EXPLOSION. (233/54.)

Alpha. The Glycerine and Carbolic Acid (equal parts) was presumably intended for making a lotion, and was to be used as directed. You are quite justified in dispensing it, but you might have satisfied yourself by judicious inquiry that it was to be used in a proper manner.

LEGAL QUERIES.

35/118. *Semper Fidelis.*—Anyone can retail spirits of salts and sugar of lead without infringing the Pharmacy Act.

31/120. *W. G. P.*—Your label renders the preparation liable to medicine-stamp duty.

36/231. *Carolus.*—The Institute of Chemistry has a monopoly only in the title "Fellow of the Institute of Chemistry." It could not prevent the assumption of the title "Consulting Chemist." Nor could any other body except the Pharmaceutical Society object to it; and a duly-qualified chemist and druggist could, no doubt, legally style himself consulting chemist in this country.

228/44. *Sydney Smith.*—It is highly probable that the label for your "Botanical Corn and Wart Solvent" would render the preparation liable to stamp-duty, as you state that it is "for removing hard and soft corns, warts, &c." But you can only obtain a decisive answer on application to Somerset House.

Chemicus wishes to know if an unqualified man can wholesale laudanum or other poisons in the ordinary course of wholesale dealing, without rendering himself liable to the law. [Yes; the Act exempts "the business of wholesale dealers in supplying poisons in the ordinary course of wholesale dealing"; but they must observe the labelling requirements.]

11/234. *Rhei.*—We think the Board would regard your "Corn cure" as liable to medicine-stamp duty. They ruled that "Corn eradicator" was liable, while "Corn solvent" they allow to go unstamped. Your directions, however, are not safe, as they too explicitly associate the preparation with the cure. You might get further information by reading a

te on page 560 of THE CHEMIST AND DRUGGIST (May 7, 87), and you could be certain about your labels by sending to Somerset House. (2) We do not consider that red and white precipitate ointments are included in the poison schedule of the Pharmacy Act.

66/233. *Guilielmus*.—You may see from page 163 of the current DIARY that the quinine and iron tonic label has been declared not to render the preparation liable to medicine-amp duty. We should expect the other labels do render the articles liable, but you had better send duplicates of them to Somerset House, and get an official decision. See paragraph "Submitting labels to the Board" on page 163 of the DIARY.

MISCELLANEOUS INQUIRIES.

225/15. *J. Watt*.—The navy hospital dispenserships are the only Government appointments, with the exception of the Army Hospital Corps, open to chemists as such.

111/5. *J. B. H.*—**Rubber Stamp Ink**.—Aniline violet, 0 grains; methylated spirit, 5j.; glycerine, 5ij.; water, 5v. Dissolve the aniline in the mixture of liquids.

202/32. *Gluc*.—The drug appears to be a species of plumbago, but we shall give full information about it in an early issue.

Books.

233/69. *Nemo*.—**Milk Analysis**.—Wanklyn's is one of the best works. It is published by Trübner (5s.)

228/28. *Dens*.—**Mechanical Dentistry**.—Hunter's "Mechanical Dentistry" (Crosby Lockwood & Co., 7s. 6d.), and Cole's "Manual" (Churchill, 7s. 6d.).

229/73. *J. G.*—For the advanced inorganic chemistry examination of the Science and Art Department, you should read Roscoe's "Lessons." There are books, such as Buckmaster's, which are specially written for the examination.

231/60. *R. E.*—Read in the first instance Hill and Cooper's "Manual of Venereal Diseases" (Lewis, 2s. 6d.). A formula for the tooth-paste will appear shortly.

228/44. *Sydney Smith*.—You will find formulae for **Shaving Cream** and **Brilliantine** in the last volume by referring to the index.

228/60. *Fils*.—**Mange in Cats**.—The affection which you describe is generally relieved by the application of sulphur ointment (made with benzoated lard). The cats in most cases lick it off, but that only hastens the cure. A piece of sulphur should be placed in their water basin.

228/40. *Calomel* makes the following **Teething Powders**, and wishes to know if there is any truth in the statement that perchloride of mercury is formed in them on keeping.

	Parts
Hydrarg. subchlorid.	1
Pulv. gum. acaciæ	$\frac{1}{2}$
" sacchar. alb.	3 $\frac{1}{2}$

Misce.

[The statement was made many years ago that perchloride of mercury is formed in a mixture of calomel and sugar, and although it has never been corroborated, the statement is generally acted up to. But the natural tendency of sugar is to deoxidise rather than assist the oxidation of mercurial salts; and we have reason to believe that the statement regarding the calomel and sugar is fallacious.]

225/58. *Pot. Nit*.—Some lime-juice cordials contain bisulphite of lime, which is undoubtedly one of the best preservatives; but cordials containing it acquire a sulphurous acid odour. The later formulæ which we have given,

containing boric or salicylic acid along with spirit as preservative, are the best, and by a judicious modification of the proportions of the preservatives you should have little difficulty in producing a good keeping article.

228/73. *Digitalin*.—**Glycerine of Pepsin**.—We have found the following formula satisfactory:—

Pepsin porci	3vj.
Acid. hydrochlor. dil.	5iv.
Aquæ	3v.
Glycerini ad	3xxx.

Macerate the pepsin in the water and acid for a day, then add the glycerine and macerate for a week. Decant or filter.

The *National Formulary* (U.S.A.) gives the following formula for **Liquor Pepsini Concentratus**:—

Saccharated pepsin	1 tr. oz.
Hydrochloric acid	1 fl. dr.
Glycerine	6 fl. oz.
Distilled water	10 fl. oz.

Triturate the saccharated pepsin with the hydrochloric acid, previously diluted with 1 fl. oz. of the water; add the remainder of the water, and allow to stand, with occasional agitation, for twenty-four hours. Then add the glycerine, mix well, and filter.

224/55. *W. R. T.*—**Stamping Tooth-brushes**.—Try the following plan:—First stamp the handles with the die, then fill in the impression with a paste made of a borax solution of shellac and the colouring-matter (vermilion, ultramarine, &c.). This composition will not run into the bone.

223/22. *Phanix*.—A good **Stickfast Paste** may be made from the following formula:—

Wheaten flour	1 oz.
Powdered tragacanth	$\frac{1}{2}$ "
" gum arabic	$\frac{1}{2}$ "
Salicylic acid	30 grs.
Oil of wintergreen	3 drops
Water	12 oz.

Mix the powders, and gradually add the water; then bring to the boil and allow to simmer for twenty minutes, stirring constantly. When cold add the oil.

229/56. *Ferrum*.—**Quinine and Iron Tonic**.—The following formula gives a preparation which keeps well and is very palatable:—

Ferri et quiniæ citratis	5ij.
Acidi citrici	gr. vj.
Tr. aurantii recentis	5j.
Aquæ destillat. ad	5vj.

S. et m.

Ajax.—It would be difficult to say what might be the minimum quantity of sulphur required to react with lead acetate in hair restorers, for the extent of the reaction is infinitesimal; possibly 2 or 3 grains of lac sulphuris to each drachm of lead acetate. A formula for Erasmus Wilson's **Hair Lotion** was given in our last volume, page 304.

221/15. *Dens Sapiente*.—The **Universal Cerate** which you send has a composition which is fairly represented by the following formula:—

Hydrargyri ammoniati	gr. xxx.
Cera flavæ	5j.
Adipis	5vj.

Ft. ungt.

229/7. *X. Y. Z.*—You must give more information about the sample before we determine its nature.

227/69. *Baron*.—Wood-shavings and common resin appear to be what your firelighter is composed of.

229/53. *J. Vause*.—You should try **Ashburton Thompson's Solution of Phosphorus**. It is made by the following modified formula:—

Phosphorus	1 grain
Absolute alcohol	5j.
Oil of peppermint	2 drops
Rectified spirit	5ss.
Glycerine to	5vi.

Place the phosphorus and glycerine in an 8-oz. flask, and heat on a water-bath, shaking occasionally until the phosphorus is dissolved. Similarly heat the alcohol, and mix with the glycerine; then add the spirit with the oil dissolved in it.

Each teaspoonful contains $\frac{1}{48}$ gr. of phosphorus.

Sagapenum is a somewhat rare gum resin, the origin of which is doubtful, but it is supposed to be derived from a species of *Ferula*. The colour of true sagapenum is yellow to reddish brown; what is generally found in the market is spurious, galbanum and asafoetida entering into its composition.

234/6. *Apprentice*.—The elixir cascara, B.P.C., is such a preparation as you require.

223/61. *Boracis*.—By the following formula you can produce a mixture or **Brain Food** ("for nervous exhaustion, mental weakness, &c."), which closely resembles the preparation which you have submitted to us:—

Bromide of sodium	5iss.
Pyrophosphate of iron	5ix.
Nitrate of potash	gr. xvi.
Glycerine	5ss.
Tincture of senna	3ss.
Comp. infusion of orange to	5viij.

Dose.—A tablespoonful thrice daily.

221/3. *W.*—The Rat Killer which you send is a mixture of powdered squill (say, 4 parts) with powdered orris (1 part), scented with verbenal. The mole-killer has also a basis of squill. "W." states that these preparations are very deadly to vermin, but harmless to cats, dogs, poultry, and human beings.

237/26. *Devonshire*.—The quantity of the mixture which you sent was too small for proper examination. If you send more, please give full particulars as to use, &c. We cannot report upon it otherwise.

231/23. *Mag. Sulph.*—Please refer to our last Educational number (September 17) for full information regarding the veterinary curriculum and examinations.

230/72. *S. J. N. T.*—The Coloured Lacquers, or varnishes for metal boxes, are made by dissolving aniline dyes or soluble resin colours in a clear varnish. Gamboge gives a fair imitation of gold.

232/31. *A. B. C.*—The fruit appears to be from a species of cassia.

Information Wanted.

[Replies to the following requests are solicited by correspondents of THE CHEMIST AND DRUGGIST.]

103/26. Address of maker of Lambert's pessary.

228/42. Glue, of the brand "Medaille de 1^{re} Classe"; "A. D." "Extra": where obtainable.

223/22. Composition of the glaze or varnish used in the Sheffield cutlery trade.

229/44. How to remove glass tablets from windows.

231/56. Formula for perfume similar to Mona bouquet.

8/232. Makers of packing-paper covered with cork raspings.

Personalities.

MR. THOMAS HUNTSMAN, of Melbourne, the President of the Victorian Pharmaceutical Society, is at present visiting this country.

MR. JOHN HARROP, of Middleton, near Manchester, has disposed of his business to Mr. John Bird. Mr. Thomas Tomlinson, of Manchester, was the negotiator and valuer for both parties.

MR. PHILIP PRINCEP, formerly assistant secretary to the British Pharmaceutical Conference, and who was recently appointed dispenser to H.M. Gaol, Brisbane, has taken over the business lately carried on at Warwick, Queensland, by Mr. C. C. T. Magee.

THE business of Mr. Edward Bishop, of Osmaston Street, Derby, has been sold to Mr. Henry B. Pare, of Bolton. Messrs. Berdoo & Co., of London, were the vendors and valuers for Mr. Bishop, and Messrs. Thomas Tomlinson & Son, of Manchester, for the purchaser.

MR. FRANCIS C. CLAYTON has disposed of his interest in the firm of John & Edmund Sturge, chemical manufacturers, Birmingham, in favour of Mr. Henry Lloyd Wilson. Mr. Wilson is a son of Mr. Wilson, the partner in the firm of Albright & Wilson, Oldbury, manufacturing chemists and phosphorus makers.

MR. J. J. HARVEY, who represented Messrs. Bourne, Johnson & Latimer in the North of England, has, after an interval of fifteen years, renewed his connection with the firm. Mr. Harvey, in conjunction with Mr. Shepherd, succeeded to the London branch of the business, which was broken up on the death of Mr. W. Mather.

SCIENCE AND THE WELSH LANGUAGE.—At a meeting in Carnarvon, in the course of a criticism of an address in the Welsh language, Mr. David Jones, chemist and druggist, said that Welsh could be proved to be a language more perfect than English, citing as cases in point the terms of astronomy and botany, which words in the Welsh were much easier understood by a young Welsh student than the English words were by an English student.

A PHARMACEUTICAL CHEMIST'S "GOLDEN WEDDING."—Mr. Thomas Howard Lavers, a pharmaceutical chemist of over fifty years' standing, celebrated his fiftieth wedding-day on Wednesday, January 11. A large number of handsome presents were sent to the much-respected couple. Mr. Lavers has for some years ceased to take any active part in the business, but his faculties are as brilliant as in years gone by. Mr. Lavers has held almost every post in local affairs, and is looked upon with respect by all who have followed him in parochial work. The lamented death of the wife of Mr. Thomas Francis Lavers (the son and partner) on New Year's Day naturally cast a certain gloom over the family, but friends from far and near, while deeply grieving over Mrs. Lavers's death, could not let the day pass without showing their high esteem for the venerable couple.

THE WILL of John James Graham, of Westmoreland Street, Dublin, and Ellerslie, Sandymount, county Dublin, apothecary, of the firm of Graham & Co., State apothecaries, &c., was proved in Dublin on January 6. Mr. Graham died on November 27 last. The assets are sworn at 15,407l. He gives his wife 2,000l., being part of his investments in the stock of the Dublin and Wicklow Railway Company; 1,000l. also of this stock to his daughter Helen, and to each of his other children a sum of 1,000l. He directs the interest in his house in Westmoreland Street and his business and stock there to be sold at the discretion of his executors. His house at Sandymount, furniture, pictures, plate, &c., there, he leaves to his wife for life, and then to his children, to be retained as their "general place of abode." He gives his assistant, Michael Kavanagh, 50l. free of duty. He directs his house in Kingstown to be sold. His watch and other personal ornaments he leaves to his son John Henry, and his other jewellery he gives his wife and daughters. The residue of his property he leaves to his wife and children in equal shares. He appoints Mr. Archibald Robinson, of Palmerston Park, Rathmines, and John Bigger, of Victoria Terrace, St. John's Road, Sandymount, executors.



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(Signed) **MORELL MACKENZIE, M.D., LONDON.**

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Counter Bills and Posters, with Name and Address, also Show Cards, on application. Printed matter supplied in any Language for Foreign Agents.
CAUTION.—The Proprietors will take immediate proceedings against all persons pirating their Trade Mark, "Blood Mixture," Labels, Wrappers, &c. or Advertisements, or in any way infringing their rights.

PUMILINE

PURE ESSENCE AND EXTRACT OF PUMILIO PINE.

We beg to announce to the Medical Profession, and to Chemists and Druggists, that we have opened a depot at 11 Billiter Square, E.C., for the constant supply of PUMILINE.

STERN'S PUMILINE, after careful analysis by competent authorities, is proved to be the **Pure Essence** and the **Pure Extract** of the **Pumilio Pines** grown on the higher altitudes of the Alps in regions of perpetual snow, and an acknowledged remedy for **Gout, Rheumatism, Throat and Chest Affections.**

PUMILINE is much prescribed by German and Austrian Physicians, and has met with unvaried success. It has also been used in this country by Medical Men with equally good results, and is now freely prescribed.

We have received a large number of letters from Medical Men testifying to the efficacy of our preparations, of which are the following:—

19 Harley Street, Cavendish Square, W., December 9, 1887.
I have much pleasure in stating that I have made use of *Oleum Pumilionis* during the last twenty-five years, and that I consider it a most valuable preparation. It acts as an admirable tonic to the mucous membrane of the air passages in cases of chronic bronchitis and laryngeal catarrh.

The other pine oils are so much better known in this country, that I really found some difficulty in getting chemists to keep the *Oleum Pumilionis*. I am very glad, therefore, to hear that the remedy is about to be used on a large scale, and I have no doubt the results will be highly satisfactory.

(Signed) MORELL MACKENZIE,
Late Physician to the London Hospital, Consulting Physician to the Throat Hospital, &c., &c.

Ferns, Co. Wexford, Ireland, December 8, 1887.

I found the *Pumiline Jujubes* a most agreeable and effective remedy in the premonitory stages of sore throat and incipient bronchitis. A few minims of the *Pumiline Essence* on lump sugar proved very useful, not only in checking the profuse expectoration in many lung affections, but also removes the fetor and considerably lessens flatulency in debilitated subjects.

(Signed)

G. GREENE, M.D., Medical Officer of Health, Co. Wexford, &c., &c.

PUMILINE is the only **Pure Essence and Extract of Pumilio Pines**, which grow in the snow regions of the Alps, and, therefore, it **ALONE** possesses of all other preparations, whether of *Sylvestris Abies Pumilionis* of lower latitudes, or other species of Pine, the physical and chemical properties which give it the faculty of being administered internally with perfect safety. This, we repeat, is not the case with any other Pine preparation, with the exception of Pinol.

The following reports bear out our statements as to the high qualities and perfect purity of *Pumiline*:—

By Professor ATTFIELD, F.R.S., Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain; Author of a Manual of Chemistry, &c. LONDON, October 14, 1887.

The odoriferous principle of the *Pumilio pine*, *Pinus pumilio*, is an essence, essential oil, or volatile hydrocarbon oil. So far it resembles the essential oils of *Pinus sylvestris*, *Abies excelsa*, &c. It also has some relations to the well-known turpentine oils yielded by most coniferous woods. It differs from them, manifestly, in its peculiarly pleasant fragrance, in other physical properties, and in certain chemical characters.

Of three samples of oil submitted to me by Messrs. STERN, their own "**Pumiline**, or *Pumilio Pine Essence*, obtained only from trees growing above the snow line," had a boiling point scarcely varying more than two or three degrees from 167° C., while "*commercial Pumilio oil*," and "*oil from trees growing below the snow line*," contained a considerable proportion of oils boiling much below that temperature. The specific gravities were:—**STERN'S Pumiline**, 0.868; commercial *Pumilio oil*, 0.859; oil from trees below snow line, 0.859.

These experiments indicate that **STERN'S Pumiline** has been so carefully distilled and rectified as to be almost wholly composed of one hydrocarbon oil, instead of a mixture of hydrocarbon oils.

Dr. SYKES writes:—"Having carefully examined your *Pumiline*, I can predict a large sphere of usefulness for it in the treatment of Gout, Rheumatism, Throat and Chest Affections, &c., on account of its high quality, purity, and general excellence. I also find it to be a very powerful antiseptic, very effectually arresting decomposition, and when vapourised it acts as a potent disinfectant and deodoriser, quickly destroying miasmata, and other offensive emanations. From its agreeable odour it is found specially valuable and thoroughly efficacious for the sick room."

We must, therefore, point out to Chemists and to the trade generally the essential importance of using **Stern's Pumiline** in preference to all other pine preparations, as it is the only one obtained from snow-grown *Pumilio Pines*, with the exception of Pinol.

PUMILINE is neither a Patent nor a Secret Preparation.

Owing to the increased demand, the **PRICES OF PUMILINE** have been reduced as follows:—

$\frac{1}{2}$ oz. Essence,	1/6 each retail, trade 15/- per doz.	Jujubes, per box, 1 1/12 each retail, trade 10/6 per doz.
1 oz. " "	2/6 " " 24/- " "	" " 2/9 " " 27/- "
Extract, per bott.	1/- " " 9/- " "	Subject to the usual discount.

Copies of other Reports (by Mr. Hehner, &c.), Pamphlet, and Samples of *Pumiline Essence*, *Extract*, *Jujubes*, and a *Pneumatic Spray for Deodorising*, &c., sent free to Medical Men and to Chemists on application to

G. & G. STERN, 11 Billiter Square, LONDON, E.C.

COMPOSITION ESSENCE.

PRIZE MEDAL



HEALTH
EXHIBITION.

This Genuine Essence of Composition will be found superior, both in Medicinal Properties and Aromatic Flavour, to that generally sold.

Owing to the great and increasing demand for this Article, Chemists will find it a PROFITABLE ADDITION TO THEIR STOCK.



Registered Trade Mark

TRADE PRICES :—

In 6d. & 1s. Bottles with attractive colored label, (Winged Lion Brand without our name,) 3s. 6d. & 6s. per doz.

SHOW CARDS SUPPLIED.

IN BULK, PER LB. 1s. 3d. ; WINCHESTER QUART 1s. 5% DISCOUNT.

EXPORT QUALITY--SPECIAL STRENGTH per lb. 1s. 6d. ; WINCHESTER QUART 1s. 4d.

POTTER & CLARKE, Wholesale and Export Botanic Druggists,
75 WESTON STREET, LONDON, S.E.

Indian Agents:—Messrs. LAWSON & CO., BOMBAY.

Price Lists on application.

Telegraphic Address—"HOREHOUND LONDON."

SPRAY PRODUCERS

For quotations of all descriptions see Druggists' Sundries List of undersigned.

See Advertisement, page 5.

EVANS, SONS & CO.

LIVERPOOL.

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HAIR BRUSHES.

For quotations of all descriptions see Druggists' Sundries List of undersigned.

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SINGLETON'S GOLDEN EYE OINTMENT. REGD.

KNOWN TO THE PUBLIC UPWARDS OF 250 YEARS AS A CERTAIN CURE FOR

INFLAMED EYES, WEAK SIGHT, SORE EYES, SCORBUTIC ERUPTIONS, PILES, BRUISES, ETC.

DR. BABINGTON recommended the use of SINGLETON'S GOLDEN EYE OINTMENT in the most virulent cases of inflammation, and said "NOTHING ELSE WOULD BE OF USE."
The eminent Oculists, DR. WARE, DR. ALEXANDER, and DR. CRITCHETT, are well known to use SINGLETON'S GOLDEN EYE OINTMENT.

UNSOLICITED TESTIMONIALS SINCE THE YEAR 1621.

Patent Medicine Dealers at home and abroad find the demand for SINGLETON'S OINTMENT very regular and profitable. Apply for Wholesale Terms Window Tablets and Counter Bills on application.

CAUTION.—None offered for Sale can be genuine unless the words SINGLETON'S GOLDEN EYE OINTMENT are engraved on the Government Stamp and round the Pot, and the Bill of Directions in which it is enclosed bears the name and address—

STEPHEN GREEN, 210 Lambeth Road, LONDON, S.E.

Bulk Oil in Barrels and Winchesters.

JENSEN'S COD LIVER OIL,

ICEBERG BRAND, in Bottles, 1/, 2/, 3/6, and 6/6.

Made at the Company's own Factory in BRETTESSNES, LOFODEN ISLANDS, NORWAY, the largest and the best equipped Factory in the World. All the Oil made by Jensen is passed through a refrigerating chamber, and is guaranteed to keep bright and clear with 7 or 8 degrees of frost. Bulk deliveries can be made in Bergen, Hamburg, or London.

ERTZ & COLLINGWOOD, 101 Leadenhall Street, LONDON, E.C

Sole Agents and Bottlers for Jensen's Cod Liver Oil (Iceberg Brand).

INTERNATIONAL FISHERIES EXHIBITION, LONDON, 1883.

COD LIVER OIL.

The Only GOLD MEDAL

For British Exhibitors was awarded to

T. J. SMITH,

10 & 11 NORTH CHURCH SIDE, HULL.

Importer of Norwegian, Newfoundland, & other varieties.

Low Quotations on application. Delivered at London or Liverpool.

ROBINSON'S ORANGE WINE.

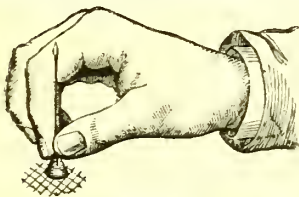
pecially prepared for Quinine Wine, does not deposit, will keep good in any climate, and well adapted for Export Trade. Supplied in Cask containing 9, 18, 30, 60, or 120 Gallons. Terms on application.

PHARMACEUTICAL SHERRY WINE.

This Wine is well adapted for Pharmaceutical Preparations, and is the strength ordered by the B.P. Price, in 6-Gallon Casks, 5/6 per gallon; in 2-Gallon Jars, 6/- per gallon, carriage paid. Casks charged 7/6, Jars 2/6, and allowed if returned. Cash or satisfactory reference to accompany order.

B. ROBINSON, Distiller and Brewer of British Wines, Church St., Pendleton, Manchester.

Trade Mark.



Registered.

THE

ASSOCIATION for the SUPPLY of PURE VACCINE LYMPH,**12 PAUL MALL EAST, LONDON, S.W.****SOLE AGENTS FOR DR. WARLWORTH'S CALF VACCINE.**

Tubes, 2s. each; Half Tubes, 1s. each. Pomade in vials, 5s.

HUMAN VACCINE, from healthy children only, microscopically examined and source quoted. Three Tubes, two-thirds full, 5s.; Tubes one-third full and Lancet-charged Points, 1s. each; Pin-points, 1s. 1d. each. Eighteen Charged Small Points, 5s. Tubes two-thirds full (same as those mentioned above, but without source), in quantities for export, £5 per 100 Tubes. Pin-points uncharged, 1s. per dozen. Vaccinations daily, between the hours of 12 and 2, by the Consulting Physician, at the uniform fee of a guinea. P.O.O.'s (including postage, and crossed London and Westminster Bank), with orders, payable to

EDWARD DARKE, Secretary.

Office hours, 10 to 4. Saturdays, 10 to 2.

EAR SYRINGES.

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See Advertisement, page 5.

EVANS, SONS & CO.
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60 Bartholomew Close.

CANADA:

EVANS, SONS & MASON, LIM.
Montreal, Toronto; and Victoria,
British Columbia.**BUYERS ARE CAUTIONED TO SEE THAT THEY GET THE****GENUINE****DR. JOHN HOOPER'S PILLS,**

Which may be known by the Name of the Inventor being on the Government Stamp.

Handbills and Show Cards will be sent on application to

MAY, ROBERTS & CO., 9 CLERKENWELL ROAD, LONDON, E.C.**AMERICAN BUYERS are particularly Cautioned!!**

Telegraphic Address—"FEEDING BOTTLES LONDON."

THE HOP BITTERS COMPANY, LIM., 41 FARRINGDON ROAD, LONDON, E.C.

JANUARY, 1888.

DEAR SIR,

We have pleasure in advising you of our having introduced a medium-size bottle of Hop Bitters, orders for which should be sent to your Wholesale Dealers on receipt of this notification.

Numerous requests have reached us from a very large and representative section of Chemists throughout the country, urging the desirability of bringing out a size to sell at a popular price. Influenced by these and the numberless enquiries received direct from the public, we have at length decided upon adopting and introducing a medium size.

The public will be informed of this by extensive advertising, the prices in future being 2/6 and 4/6.

Write to your Wholesale Dealer for quotation, and put in supply to meet the demand.

Yours truly,

The HOP BITTERS CO., Limited.

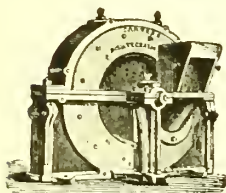
CARTER'S DISINTEGRATORS

Will Pulverise, Granulate, or Shred almost any Mineral, Vegetable, or Animal Substance.

NEARLY 1,100 IN USE

IN ALL PARTS OF THE WORLD.

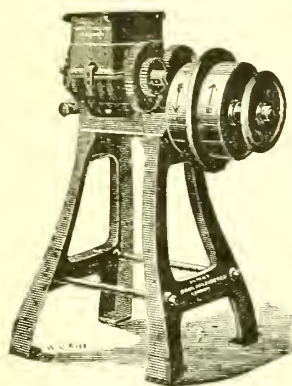
For Grinding Sugar, Bark, Linseed, Ginger, Pepper, Spices, Salt, &c., this Machine is invaluable. Made in 9 Sizes. Illustrated Catalogue may be obtained on application.



Samples of ANY Material will be Ground free of charge.

J. HARRISON CARTER, 82 MARK LANE, LONDON; and PARIS.

Telegraphic Address—Milling London.

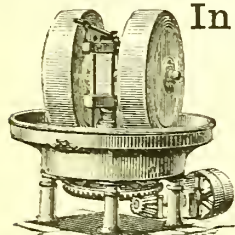
**CHEMISTS' MACHINERY.****PILL MASS KNEADING MACHINES.****PILL MAKING MACHINES.****PELLET PRESSES.****DRUG GRINDING MACHINES.****SIFTING MACHINES.**

FULL PARTICULARS OF ABOVE ON APPLICATION TO

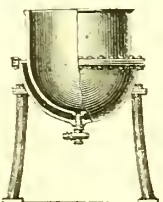
WERNER & PFLEIDERER. 86 Upper Ground St., LONDON, S.E.
Blackfriars Bridge,

EVAPORATING PANS, STILLS, ETC.

In COPPER, IRON, TIN, ENAMELLED IRON, &c.



Edge Runner Mill for Pulverising, &c., &c.



Steam Jacketted Pan.

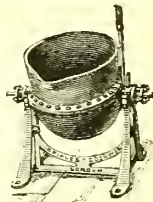
Granite Roller Grinding Mills,
Edge Runners, Disintegrators,
&c.

Hydraulic Presses, Pumps,
Engines, Boilers, &c.

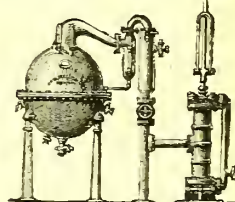
ESTABLISHED 1829.

Telegrams—

"BRINJES GOODWIN LONDON."



Steam Jacketted Tilting Pan.



Vacuum Pan Condenser and Air Pump.

BRINJES & GOODWIN, WHITECHAPEL ENGINE WORKS, FIELDGATE ST., LONDON.

IMPORTANT TO CHEMISTS & PATENT MEDICINE DEALERS
Large Profits and a Ready Sale. NO RISK.

BECK'S COMPOUND TONIC

HOP BITTERS

Composed of Hops, Buchu, Podophyllin, Dandelion, and other valuable Ingredients.

IN HALF-PINT BOTTLES TO RETAIL AT 1/-

SOLE PROPRIETOR—

ALBERT N. BECK, WHOLESALE CHEMIST, HASTINGS.

PRICES—CASES OF 3 DOZEN, 22/- NET.

Free on rails in London. Cases and Packing 2/- extra, allowed in full on return.

Special Offer to large Purchasers.—If 6 dozen and upwards ordered, the Name of Retailer will be printed on Label, and 1,000 Handbills bearing Name and Address will be supplied, and also Show Cards.

TERMS:—CASH WITH ORDER OR TWO LONDON REFERENCES.

TRUSSES.

For quotations of all descriptions see Druggists' Sundries List of undersigned.

See Advertisement, page 5.

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LIVERPOOL.

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EVANS, LESCHER & WEBB,
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PELLETIER'S QUININE.

Sulfate de Quinine des trois Cachets,
 Pelletier, Delondre et Levailant.

SOLE AGENT—

CHAS. BRUMLEU,
 7 Mincing Lane, LONDON, E.C.

WYLEYS' GELATINE COATED OVAL PILLS.

The only Gelatine Coated Oval Pills of ENGLISH MANUFACTURE in the Market. Special List on application.

Gross Botts.		Gross Botts.		Gross Botts.	
Bismuth.	Pepsin.	Ferri Hypophosph. Comp.	Phosphorus, $\frac{1}{30}$	Ext. Nuc.	
(Wyleys'), R. Bismuth, Nit., 2		(Wyleys'). Each pill represents	Vom., $\frac{1}{4}$ gr. ...	...	2/-
gr.; Pepsin Porci, 1 gr.; Ferr.		1 fluid drachm of Syrup of the	Podophyllin Resin, $\frac{1}{3}$ gr.; Pil.		
Redact., 1 gr.; Strychnin, $\frac{1}{24}$ gr.	3/6	Hypophosphites... ..	Rhei Co., 4 gr. ...	2/6	
Caleli Sulphid. $\frac{1}{10}$, $\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{2}$, 1 gr.	1/8	Ferri Quininae et Strych-	Potass. Permang., 1 gr., 2 gr.	2/-	
Cascara Sagrada (Ext.), 2 gr.	2/-	ninae Phosph. (Wyleys'), re-			
Ergotin. Comp.		presenting Easton's Syrup ...	Tie Douleureux		
R. Ergotin, 1 gr.; Ferri Sulph.		Hydrarg. et Arsenic. Iodid.	R. Ferri Redact., 2 gr.; Chino-		
Exsic., 1 gr.; Ext. Hellebor.,		(Wyleys'). Each pill equiva-	quinæ 1 gr.; Ext. Colchici Acet.,		
1 gr.; Ol. Sabinæ $\frac{1}{2}$ m.; Ext.		lent to 5 minims of Donovan's	1 gr.; Ext. Belladon., $\frac{1}{4}$ gr. ...	3/-	
Aloes Soc., 1 gr....	3/-	Solution			

WYLEYS & CO., COVENTRY.

LONDON ADDRESS—1a BURY STREET, ST. MARY AXE, E.C.

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**STEINIGER & CO.,
DRUG & SPICE**

MERCHANTS,
9 MINCING LANE, LONDON, E.C.,
And 52 VIRGINIA STREET, GLASGOW.

SPECIALITIES:

DALMATIAN INSECT POWDER.

English ground, from closed Flowers, pure & powerful.

GLYCERINE,

1-260 DOUBLE DISTILLED, PURE.

TELEGRAPHIC ADDRESS—"DRUGSTERS LONDON."

ADVANCE WITH THE TIMES!

Every Chemist should put up SYR. HYPOPHOSPH. CO., and push it as the most modern form of "Chemical Food" and "Quinine Tonic."

YEATMAN'S

SYR. HYPOPHOSPH. COMP.

Is the STRONGEST and MOST ELEGANT Syrup yet offered.

ONLY CHEMISTS ARE SUPPLIED.

It contains in each fluid drachm—

Hypophosphite of Lime	1 gr.
" " Soda	2 grs.
" " Potassa	1 gr.
" " Iron (Protoxide).....	1 gr.
" " Manganese.....	1/4 gr.
" " Quinine	1/4 gr.
" " Strychnine.....	1/100 gr.

SLIGHTLY ALKALINE.

The composition may be varied to suit buyers. Diluted with an equal bulk of Syrup it possesses the average strength of the advertised Syrups. As HYPOPHOSPHITE, and NOT Pyrophosphate of Iron, is used in this preparation, no inelegant precipitate occurs.

PRICES ON APPLICATION.

F. J. YEATMAN, M.P.S.

141 KENTISH TOWN ROAD, LONDON, N.W.

34

STRENGTH, HEALTH, AND ENERGY.**DR. LALOR'S
PHOSPHODYNE**

For TWENTY-FIVE YEARS has maintained its world-wide reputation as THE ONLY SAFE RELIABLE PHOSPHORIC REMEDY ever discovered for the Permanent Cure of Brain Wreckage, Paralysis, Sleeplessness, Harassing Dreams, Premature Decay of Vital Power, and all Functional and Diseased Conditions of the System dependent upon the Deficiency of the Vital Forces. It

Cures Dyspepsia, Nerve and Heart Disease.
Cures Kidney and Liver Complaints.
Cures all Blood Disorders.

Cures Consumption and General Debility.
Checks all Wasting of the Vital Forces, from whatever cause arising.

THE EFFECT of this Standard Phosphoric Remedy in Nervous Debility and its Kindred Evils is Immediate and Permanent, all the Miserable Feelings and Distressing Symptoms disappearing with a rapidity that is REALLY MARVELLOUS.

DR. LALOR'S PHOSPHODYNE

Actually creates new Nervous Fluid and Brain Matter, by supplying the Blood with its Electric Life Element—PHOSPHORUS, the very core and centre of the Brain itself—Restoring the fullest and most Vigorous conditions of Robust Health of Body and Mind.

Full Printed Directions for the guidance of Patients in the Self-Treatment of the above Diseases are enclosed with each Bottle.

DR. LALOR'S PHOSPHODYNE

Is the only Medicine of the kind or name awarded a Certificate of Merit at the Calcutta Exhibition, 1883-4, where all Countries were Exhibitors, and the only Trade Mark—"PHOSPHODYNE"—Registered and Protected under the Trade Marks Act.

THOUSANDS of unimpeachable Testimonials from all parts of the World, and from the highest Medical Authorities, prove conclusively the Verdict Universal that in the World of scientific research no other Phosphoric Preparation has received such exalted praise and distinguished recognition.

Sold in bottles at 4s. 6d. and 11s. by all Chemists throughout the World.

MANUFACTURED ONLY AT

DR. LALOR'S PHOSPHODYNE

LABORATORY,
HAMPSTEAD, LONDON, N.W.

NOTICE.

Messrs. YOUNG & POSTANS'

EFFERVESCENT GRANULES

ARE NOW SUPPLIED BY

CURTIS & CO.

MANUFACTURING CHEMISTS,

48 BAKER STREET, W.

Who have purchased the sole right to manufacture and use their name in connection with these Granules.

PRICES FAVOURABLY REVISED.

ENEMAS.

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NOTICE.

There is absolutely no Acid or Alkali used in the manufacture of

PETROLINA.**PETROLINA**

Is a pure product of Petroleum deodorised by the action of superheated Steam and Air, and decolorised by filtration through Bone Charcoal.

NEVERTHELESS,

PETROLINA is as Cheap as any of the inferior Jellies produced by the less expensive and highly deleterious Acid process.

THEREFORE,**BUY THE BEST,**

When it is also

THE CHEAPEST.

ORDER PETROLINA THROUGH ANY WHOLESALE DRUGGIST OR DRY-SALTER.

E. A. DE PASS & CO., 3 Coleman Street, London, E.C., **SOLE AGENTS.**

RIVER PLATE, SOUTH AMERICA.

Centro de Alimentos Digestivos, Productos Farmacéuticos, &c.
Calle de Cuyo 465, 467, & 469, BUENOS AYRES.

CARLOS J. CHRISTIE & CIA.**General Commission Agents,**

Specially dedicated to the introduction of **Pharmaceutical Preparations, Surgical Aids and Appliances, &c.**, in the propagation and sale of which they possess special facilities, owing to their extensive connection amongst the buyers, and the fact of their being personally acquainted with the great majority of the Medical Profession of this and the adjoining Republics, whom they canvass periodically.

Correspondence, which will receive prompt attention, solicited.

Address: Messrs. **CARLOS J. CHRISTIE & CIA.**

Apartado de Correos, P. O. Box No. 918,

BUENOS AYRES, RIVER PLATE.

PLASTERS.

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MENTHOL CONES.

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60 Bartholomew Close.

CANADA:

EVANS, SONS & MASON, LIM.

Montreal, Toronto; and Victoria,
British Columbia.

The Mormon Elder's**DAMIANA WAFERS**

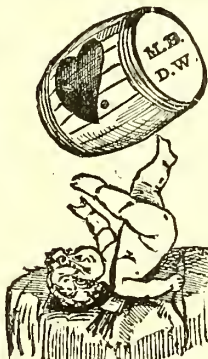
THE MOST POWERFUL
INVIGORANT
EVER PRODUCED.

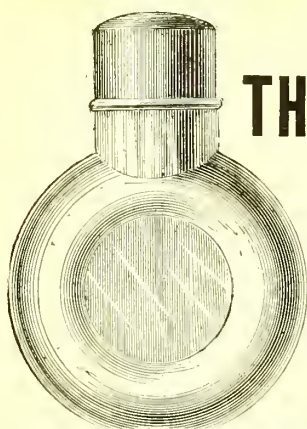
Permanently restores those weakened by early indiscretions, imparts youthful vigor, restores vitality, strengthens and invigorates the BRAIN AND NERVES. A positive cure for IMPOTENCY and Nervous Debility. Prompt, Safe, and Sure. 4/6 per box, 6 for 22/6. Usual discount to the Trade. Send for Circular.

F. B. CROUCH,

New York Address, 202 Grand Street.
London Depot, 90 Chiswell St., E.C.

Hovenden & Son, Sanger & Son, Barclay & Sons
Edwards & Son, and all Wholesale Druggists.





EXTRAORDINARY CHEAP LINE!!!

THE WATCH SMELLING-SALT BOTTLE

PLAIN OR FLUTED.

These Bottles are fitted with **BEST SCREW NICKEL CAPS**, lined with Washers, and are the most wonderful value ever offered. A trial order will prove this fact.

PRICE, IN BEST WHITE FLINT OR ASSORTED COLOURS, **12/** PER GROSS, in not less than 1 gr. lots.

Orders may be sent through any of the Wholesale Houses, or direct to

E. A. HEARN & CO., Manufacturers of Glass Bottles of every description.

381-3 KINGSLAND ROAD, LONDON, E. [2]

The annexed Illustration shows exact size of above-mentioned Bottle.

BOTTLES

For quotations of all descriptions see Druggists' Sundries List of undersigned.

'See Advertisement, page 5.

EVANS, SONS & CO.
LIVERPOOL.

LONDON: EVANS, LESCHER & WEBB, 60 Bartholomew Close.
CANADA: EVANS, SONS & MASON, LIM. Montreal, Toronto; and Victoria British Columbia.

DISPENSING BOTTLES.

"I. & CO." BRAND.

SPECIAL OFFICE NOW OPEN—

61 HALTON ROAD, ISLINGTON, LONDON, N.

3 and 4 oz. Bottles, I. & Co. Brand .. 6/6 per Gross.
6 and 8 oz. " " " .. 7/6 "
12 oz. " " " .. 11/6 "
1½ oz. Vials, long, short, or medium, 4/3 per Gross.
Our Crystal Blue Tinted Bottles, 6 and 8 oz., 8/9 per Gross.
National Feeders, first-rate, Screw Top, and Black Fittings, 3/6 per Doz., or 40/ per Gross.

ALL OTHER SIZES EQUALLY LOW.

I. ISAACS & CO.

GLASS BOTTLE MANUFACTURERS,
Ho to receive a continuance of their friends' commands for the New Year 1888.

GLASS

Dispensing,
Drugs, Oils,
Mineral Waters
Perfumery,
Patent Medicines,
&c., &c.

KILNER BROTHERS,

No. 18 Gt. N. GOODS STATION, KING'S CROSS, LONDON.



BOTTLES

FEEDERS in
immense variety
of styles.
Best Quality.
Low Prices.
Lists on application.

PURE SPIRITS OF WINE.

60 o.p., 20/3 per gall.; 56 o.p., 19/9 per gall.

1/ per Gall. Discount for Cash with order.

Further allowance for quantity. STEAM STILL ONLY.

GEORGE PHILLIPS & CO.,
ST. ANDREW'S DISTILLERY, CLERKENWELL RD.
LONDON, E.C.

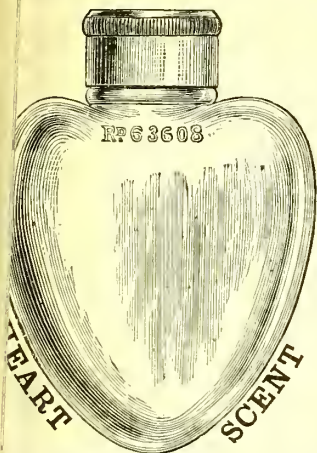
FEEDING BOTTLES.

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EVANS, SONS & CO.
LIVERPOOL.

LONDON: EVANS, LESCHER & WEBB, 60 Bartholomew Close.
CANADA: EVANS, SONS & MASON, LIM. Montreal, Toronto; and Victoria, British Columbia.



R. H. BARRETT FLINT GLASS BOTTLE WORKS,
THE OVAL, CAMBRIDGE HEATH, LONDON, E

NEVER FAILING! SELF ADJUSTING! PATIENCE SAVING!
R. H. B.'S NEW PATENT BOTTLE. The only Really Perfect
Capped Bottle for Vaseline,
Pomade, Dry Powders, &c. Prices: 2 oz. 25/-, 3 oz. 28/-, 4 oz. 32/- per gross.

THE HEART SCENT BOTTLE (Reg.), for Salts or Perfume.
Is most admirably adapted for pocket use, combining great beauty of design with the maximum of convenience.
Prices as follows, Plain or Fluted:—WHITE, 21/- per gross; COLOURED, 24/- per gross.
If put up in Dozen Boxes, 2s. per gross extra.

METAL SCREW-CAPPED LIMES, in White Flint, Actinic Green, or Amber.
The Best Bottle for Glycerine or Pills. Prices: 1 oz. 13/6, 2 oz. 15/-, 3 oz. 18/-, &c. per gross.

Chemists' and Perfumers' Bottles in great variety, Plain or Stoppered.

Orders may be sent to the **PRINCIPAL WHOLESALE HOUSES.**

POMADE BOTTLES.

or quotations of all descriptions see Druggists'
Sundries List of undersigned.

See Advertisement, page 5.

EVANS, SONS & CO.

LIVERPOOL.

LONDON:

CANADA:

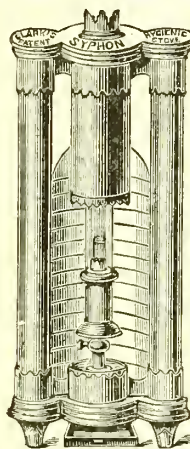
EVANS, LESCHER & WEBB,

EVANS, SONS & MASON, LIM.

60 Bartholomew Close.

Montreal, Toronto; and Victoria,
British Columbia.

40 inches high, 18 inches wide.



THE
"SYPHON"

(REGISTERED TITLE)

(CLARK'S PATENT)

GAS HEATING STOVES.

NO FLUE REQUIRED.

No smoke. No smell. No dirt or trouble. No danger. All sulphurous vapours are condensed inside the Stoves, and passed off as a liquid into tray beneath. The ONLY SAFE ones for use in Hospitals, Sick Chambers, Greenhouses, Bedrooms, Halls, Shops, Offices, Churches, Schools, &c. **BEWARE OF IMITATIONS.**

Price Lists and Terms on application to

S. CLARK & CO., Patentees

"Syphon" Works, Park St.,

ISLINGTON, LONDON, N.



J. A. CURLE, Wholesale & Export Bottle Manufacturer.

Druggist, Sundry and Perfumery Bottles of every description, Plain and Stoppered, in White, Blue, Amber, Actinic, Green, and other Colours. Also Metal-capped Pomades and Screw-necked Feeding Bottles in Green or White Glass.

MOULDS MADE TO ANY PATTERN.

PERSEVERANCE GLASS WORKS, Homer Rd., South Hackney, LONDON, E.

GOVERNMENT DISINFECTANT

CARBOLIC POWDER (PINK) in 1 Cwt. 2 Cwt. CASKS 1lb & 1/2 Packages

CARBOLIC POWDER (PINK) in TINS 6d & 1/- CARBOLIC SOAP No 1 & No 2

CARBOLIC FLUID in 6d 1/4 & 1/6 STOPPED BOTTLES CARBOLIC & GLYCERINE SOAP in 1/4 lb. TABS

FREE FROM POISON
AGREEABLE IN SMELL.

THE GOVERNMENT SANITARY CO.,

LONDON E.

TO BE HAD FROM ALL
WHOLESALE DRUGGISTS.

MEUPHROSINE.

The Only Absolutely Safe
and Certain Cure in
all cases of

SLEEPLESSNESS

Caused
by Nervousness,
Overwork, &c.

Guaranteed to contain
no Opium, Chloral, Morphia,
Bromide, or Alcohol.

Does not affect the Heart's action
nor disturb the Brain.

Price per Bottle, 2s. 9d.; post free, 3s.

Of all Chemists and of the Proprietors and
Manufacturers,

S. RATTI & CO.,

8 Jeffrey's Square, St. Mary Axe, London, E.C

HOUSEHOLD REQUISITES.

For quotations of all descriptions see Druggists'
Sundries List of undersigned.

EVANS, SONS & CO.

LIVERPOOL.

LONDON:

CANADA:

EVANS, LESCHER & WEBB,

EVANS, SONS & MASON, LIM.

60 Bartholomew Close.

Montreal, Toronto; and Victoria,
British Columbia.

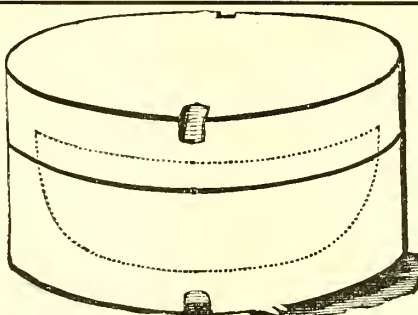
WILLIAM TOOGOOD'S

SPECIALITIES.

WAREHOUSE AND SHOW ROOM, BURLINGTON BUILDINGS, HEDDON STREET, REGENT STREET, LONDON, W.

TOOGOOD'S IMPROVED PATENT EARTHENWARE COVERED POTS

*Are claimed to be the most perfect
and convenient yet offered to the Trade.*



Owing to the increasing demand for our Patent Pots, we have introduced a Special THIN Series for Dispensing.

These Pots are beautifully glazed and finished, and, being very light, are specially adapted for sending by post.

ORDINARY THICKNESS—										
1 dr.	2 dr.	$\frac{1}{3}$	$\frac{3}{4}$	1	$1\frac{1}{2}$	2	3	4	6	8 ounces.
1/6	1/6	1/6	1/7	1/8	1/10	2/2	2/10	3/4	4/6	5/6 per doz.
THIN for DISPENSING—										
$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{2}$	2	3	4	6	8 ounces.		
1/7	1/8	1/10	2/-	2/4	3/-	3/8	5/-	6/- per doz.		

TOOGOOD'S BURNT-IN POTS, FOR COLD CREAM, TOOTH PASTE, &c.

ARTISTIC DESIGNS AND NEW SHAPE JARS.

Samples and Prices forwarded upon application.

TOOGOOD'S GRADUATED MEASURES.

OF A VERY SUPERIOR QUALITY.
CONICAL OR OYLINDRICAL. STOUT AND ACCURATE.

5l.	3ij.	3ss.	3i.	3ij.	3iij.	3iv.	3vj.	3vij.	3x.	3xx.	3xl.	3lx.
6/6	8/6	6/-	7/-	8/-	10/-	11/6	15/-	18/-	18/-	25/-	36/-	72/-

STAMPED, 3/- PER DOZEN EXTRA.

TOOGOOD'S BOXWOOD-TOP CORK BOTTLES

Are all sent out washed and dried, ready for immediate use.

TOOGOOD'S MEXICAN SQUARES.

The most Showy Bottle in the Trade for all Toilet Requisites, as Hair Washes, Face Lotions, and Tooth Preparations. *Samples and Prices upon application.*

TOOGOOD'S CORN-SOLVENT BOTTLE.

2-dram Actinic Green Round Shouldered Vial, with Boxwood Top, Cork, and Camel Hair Pencil, in White Enamel Slide Boxes, price 18/- per gross.

TOOGOOD'S POISON BOTTLES.

ACCURATE AND STRONG. SEXAGON SHAPE IN DARK BLUE, ACTINIC GREEN, OR FLINT GREEN COLOUR. FLAT SQUARE SHAPE, IN DARK BLUE COLOUR.

AUSTRALIAN AGENCY AND SAMPLE ROOM:

Mr. A. I. JOSEPH, Bridge Street, Sydney.

Telegraphic Address: "TOOGOOD LONDON."

Telephone No. 3834.

William Toogood's Price Current of Glass Bottles, Measures, Earthenware, Druggists' Sundries, &c., will be forwarded post free upon application.

SPECIAL ATTENTION GIVEN TO SHIPPING ORDERS.

"INTERNATIONAL" FEEDING BOTTLES. REGISTERED.

UNSOLICITED TESTIMONIAL.

Apothecaries' Hall, Old Colwyn,

Dear Sirs,—

North Wales, 3/1/88.

In "The Chemist and Druggist" of December 31st, in "Exchange Column," and under the heading "Information Wanted," a

Mr. Jones, 4 Mackintosh Place, Cardiff,

inquires who are the Makers of "International" Feeding Bottles?

I wrote to him and enclosed your address, and told him you are the Makers, and that I had had them and was very pleased with them. I consider the Bottles, with fittings complete, are excellent value for the money.

I should be glad if you will send a few of your Trade Lists (Illustrated) of Feeding Bottles, Honey Jars, and of other goods you supply. Please send three or four of each List. Trusting to your attention.

Please do not omit to send various samples of Honey Jars, so that I may be able to select those I consider best for my requirements.

I remain, yours truly,

Messrs. Breffit & Co.

J. H. HOLMES, Chemist.

SOLE MAKERS

"INTERNATIONAL" FEEDING BOTTLES
BREFFIT'S
(LIMITED)
AIRE & CALDER BOTTLE CO.

83 UPPER THAMES STREET, LONDON,

Manufacturers every class and description Bottles, Glassware, &c.

SPECIAL WHOLESALE TRADE PRICE LISTS (ILLUSTRATED) FREE ON APPLICATION.

PERFUMERY, POMADES, ETC.

For quotations of all descriptions see Druggists' Sundries List of undersigned.

See Advertisement, page 5.

EVANS, SONS & CO. LIVERPOOL.

LONDON: EVANS, LESCHER & WEBB, 60 Bartholomew Close.
CANADA: EVANS, SONS & MASON, LIM. Montreal, Toronto, and Victoria, British Columbia.

SHIPKOFF & CO. OTTO OF ROSE

MANUFACTURERS & MERCHANTS,
KIZANLIK, BULGARIA.

VIRGIN OTTO ONLY DEALT IN.

REPRESENTED IN ENGLAND BY

GEO. P. BAKER, 19 Ivy Lane, Newgate St., London, E.C.

AYER'S RECAMIER PREPARATIONS FOR THE COMPLEXION.

Positively made from a formula used for forty years by Madame Recamier, the noted beauty of her day, and never before manufactured for sale. Used daily, to the exclusion of all other articles of a like nature, by Mesdames Adelina Patti, Sarah Bernhardt, Lillie Langtry, Mrs. James Brown-Potter, and hundreds of others. Terms to the trade on application.

RECAMIER CREAM—A Curative. RECAMIER BALM—A Beautifier.
RECAMIER POWDER—For Ladies and Infants, and Gentlemen after Shaving

Home Office—39 & 41 Park Place, New York City, U.S.A.

OKELL'S ORIGINAL MONA BOUQUET

Retail, 1/, 1/9, & 3/6; Wholesale, 7/12/, & 22/6 per doz.

This much-admired Perfume (first introduced by the late Joseph Okell) may be obtained from the leading Patent Medicine Houses, Wholesale Druggists, and Druggists' Sundry Dealers.

Sole Consignee—THOMAS WEST, 59 and 61 Chester Road, Stretford, Lancashire.

Special Agents—B. G. LENNON & CO., London, and Port Elizabeth, Cape Town, and East London, South Africa.

The Prices of FRENCH and ITALIAN ESSENTIAL OILS ARE RAPIDLY ADVANCING.

For samples and quotations apply to

R. C. TREATT,

Dunster House, Mincing Lane, LONDON, E.C.

ESSENCES, MUSK, CIVET, AMBERGRIS, Guaranteed Pure.

TOILET REQUISITES.

For quotations of all descriptions see Druggists' Sundries List of undersigned.

See Advertisement, page 5.

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LONDON: EVANS, LESCHER & WEBB, 60 Bartholomew Close.
CANADA: EVANS, SONS & MASON, LIM. Montreal, Toronto, and Victoria, British Columbia.

GREENSILL'S THE ORIGINAL

When ordering from **MONA** AND ONLY GENUINE.

Wholesale Houses

please specify

'GREENSILL'S.'

BOUQUET

SOLE MANUFACTURERS—

T. S. GREENSILL & SON

LOCH PARADE,

DOUGLAS, ISLE OF MAN.

PATRONISED BY HER MAJESTY.

BARBER'S ORIGINAL CRIMSON MARKING INK,



WHICH IS CHANGED BY HEAT TO A JET BLACK.

Put up for Retail Sale in 6d., 1s., 2s., 2s. 6d., and 5s. Bottles.

Also Barber's Concentrated Liquid COCHINEAL, for Colouring Jellies, Custards, &c.

Put up in 6d. and 1s. Bottles.

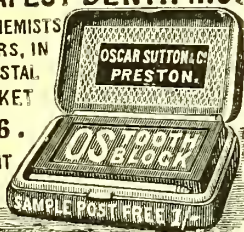
MANUFACTURED ONLY BY THE PROPRIETORS—

G. BARBER & CO., Club Moor, LIVERPOOL.

Can be obtained through any of the Wholesale Firms in Great Britain, or from FELTON, GRIMWADE & CO., Melbourne; ELLIOT BROS., Sydney and Brisbane; KEMPTHORNE, PROSSER & CO., Dunedin and Auckland; FELTON, GRIMWADE & CO., Wellington; or direct from the Manufacturers—G. BARBER & CO., Club Moor, Liverpool, England.

BEST & SAFEST DENTIFRICE

AS BY ALL CHEMISTS
AND PERFUMERS, IN
ELEGANT CRYSTAL
TOILET CASES
PRICE 2/6.
AS IN PATENT
METALLIC BOX
PRICE 1/6.



OSCAR SUTTON & CO., Preston, Lancashire.

OS Tooth Blocks can be had through all the leading Wholesale Houses throughout the world. No. 0, loose, without boxes; No. 1, in patent metallic boxes; No. 2, in crystal caskets.

The sales have enormously increased. Counter bills, with retailers names, supplied gratis through any Wholesale Agent.

OVER 1,000 TESTIMONIALS.

CHLORIDE OF LIME!

IN AIRTIGHT WATERPROOF & ODOURLESS PACKAGES

INVENTORS AND MANUFACTURERS NATIONAL CHEMICAL CO., LONDON

THE N. C. Cos. PACKAGES HAVE STOOD THE TEST FOR MANY YEARS, AND CAN ALWAYS BE RELIED UPON TO GIVE SATISFACTION.

KEPT IN STOCK BY ALL WHOLESALE DRUGGISTS &c.
SEE THEIR PRICE LISTS

SILVER MEDAL
I.E. 1884.



BEWARE
OF OTHERS
CALLED AIRTIGHT
PACKAGES

PILL BOXES.

For quotations of all descriptions see Druggists' Sundries List of undersigned.

See Advertisement, page 5.

ELASTIC HOSIERY.

For quotations of all descriptions see Druggists' Sundries List of undersigned.

See Advertisement, page 5.

EVANS, SONS & CO. LIVERPOOL.

LONDON: CANADA:
EVANS, LESCHER & WEBB, EVANS, SONS & MASON, LIM.
60 Bartholomew Close. Montreal, Toronto, and Victoria,
British Columbia.

EVANS, SONS & CO. LIVERPOOL.

LONDON: CANADA:
EVANS, LESCHER & WEBB, EVANS, SONS & MASON, LIM.
60 Bartholomew Close. Montreal, Toronto, and Victoria,
British Columbia.

This Unique Preparation has the extraordinary property of keeping the

HAIR IN CURL.

Now used by Ladies in all parts of the World.

Needs but an introduction to command a ready and constant sale.

FRIZZETTA
(REGISTERED.)
Sap-
plied by all
London Pat.
Medicine Houses
Handsome Show-
cards, Glass Tablets, and
Circulars profusely supplied.
Foreign and Colonial Chemists
should write for Terms, &c.

F. W. BATES, CHEMIST,

BROOKS'S BAR, MANCHESTER

Telegraphic Address—"FRIZZETTA MANCHESTER."

ACETIC ACID

(CRUDE AND PURIFIED).

Write for quotations to the Manufacturers:

USINES DES MOULINS,

Faubourg du Sas,

GHEENT (BELGIUM).

The Usines des Moulins will be glad to take up the representation for Belgium of a British firm of Chemical Manufacturers.

PUFF BOXES SPONGES

For quotations of all descriptions see Druggists' Sundries List of undersigned.

See Advertisement, page 5.

EVANS, SONS & CO.
LIVERPOOL.

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60 Bartholomew Close.
CANADA: EVANS, SONS & MASON, LIM.
Montreal, Toronto, and Victoria,
British Columbia.

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LIVERPOOL.

LONDON: EVANS, LESCHER & WEBB,
60 Bartholomew Close.
CANADA: EVANS, SONS & MASON, LIM.
Montreal, Toronto, and Victoria,
British Columbia.

BOORD & SON, RECTIFYING DISTILLERS & WINE MERCHANTS, ALLHALLOWS LANE and BARTHOLOMEW CLOSE, } LONDON, E.C.,

OFFER LOWEST QUOTATIONS, ON APPLICATION, FOR

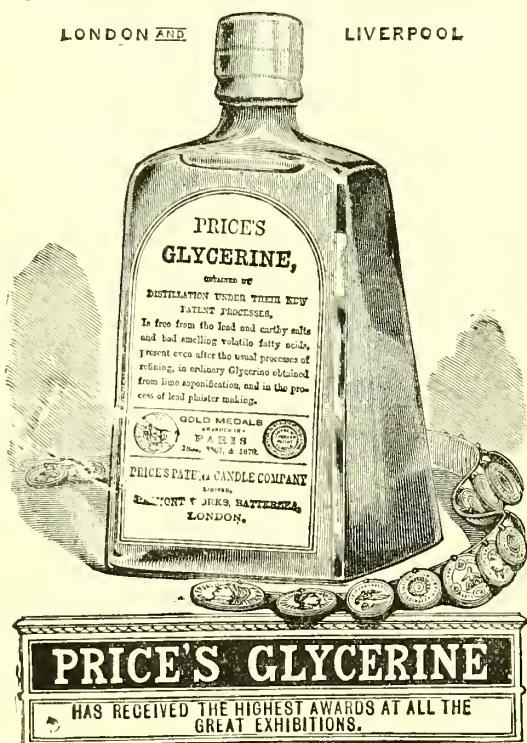
FINEST RECTIFIED SPIRITS OF WINE,

Methylated Spirit and Finish; Finest Orange Wine, Sherries,
and Malagas for Medicated Wines.

PRICE'S PATENT CANDLE COMPANY LIMITED.

LONDON AND

LIVERPOOL



This entirely new and excellent health-giving preparation *SOFTENS* the WATER, and gives it a most

DELICIOUS ODOUR.

PASTA MACK

BEAUTIFIES THE COMPLEXION

In a most extraordinary way.

Should be in every Bathroom and Bedroom.
To be had of all respectable Chemists and Perfumers throughout the world.

Sole Manufacturer and Inventor, **H. MACK, Ulm a/D.**

FREE SAMPLES GIVEN AWAY WITH EVERY TRIAL ORDER.

PINE'S DEVONSHIRE OILS

PRICE	
1 dozen, 13/6	Per doz. net in
" 12/6	Wine Bottles.
" 11/6	CARRIAGE PAID.
" 10/6	Single Sample
	Bottle, 1/9.

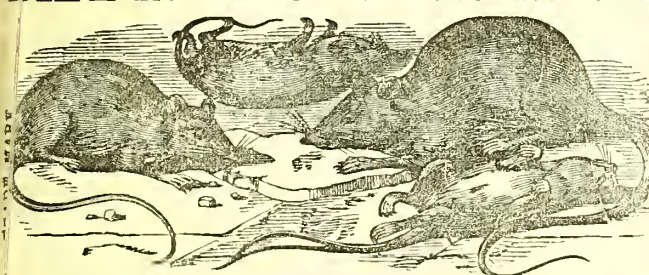
FOR HORSES, COWS, SHEEP, AND LAMBS.

THESE CATTLE OILS are prepared from the Original and Valuable Recipe of WILLIAM YOUATT PINE, and are unsurpassed, their great sale being a sufficient guarantee of their EXCELLENCE.

PREPARED AND SOLD WHOLESALE BY

WALTER GREGORY, 31 Fore Street, WELLINGTON, SOMERSET.

BATTLE'S VERMIN KILLER.



TRADE MARK.

Mice eat it readily and die on the spot.

Has an immense Sale, and wherever introduced never fails to give satisfaction. Mice appear attracted to it as by magic, eat it readily, tumble over, and die on the spot. Rats usually die in their runs. Parties troubled with Vermin may be cleared at once, either from Stacks, Houses, or Ships.

TESTIMONIALS.—Thousands might be published.

From Mr. THOMAS COLTON, Agent for Selby.—A friend of mine purchased a Packet of your VERMIN KILLER last night, doubting its efficacy to-day he called in to say that he had found fifteen dead mice, and had only used part of a packet. From Mr. EDWARD STURDY, Flemington Mills.—I duly received by post the Packet of your VERMIN KILLER, and found it as represented in your advertisement. It speedily destroyed all the mice in my granary. I enclose 2s. for two more Packets. Leeds, November 6th, 1857.—I have tried BATTLE'S VERMIN KILLER, and have found it most effectual in clearing my premises of LARGE QUANTITIES OF RATS.—THOMAS S. CROSLAND.—Mr. Stead.

Sold in Packets, 3d., 6d., and 1s. each.

SOLE PROPRIETOR:

Mr. J. R. BATTLE, Chemist, Lincoln, England.

No Chemist or Storekeeper should be without a supply.

SHIRLEY'S "AI BRAND" MENTHOL CONES ARE PUREST AND BEST.



No. 24.—6d.
Bottle shape.
VERY SALEABLE.
3/6 per doz.

No. 23A.—6d.
Cone on boxwood
stopper,
with glass dome.
3/6 per doz.

No. 21A.—1s.
Same as 23A, only
larger.
6/3 per doz.

No. 17s.—6d.
Drum shape,
boxwood.
4/ per doz.

No. 17.—1s.
Same as 17s,
only very large.
6/6 per doz.

SEND an order for 25s. worth of assorted shapes. and secure a Dummy Cone, 12 in. high, given free of charge.

ARTHUR W. SHIRLEY (late J. G. SHIRLEY), 30 PATERNOSTER SQUARE, LONDON, E.C.

EUCALYPTUS GLOBULUS.

We are prepared to sell in lots of 100 lbs. or more Pure Oil of Eucalyptus Globulus, distilled by us in California.

DOWNIE B. I. P. CO., 4 Redcross St., LIVERPOOL;
And 204 MARKET STREET, SAN FRANCISCO.



FOR PREVENTION, RELIEF, AND CURE OF

GOUT, RHEUMATISM, COLDS, NEURALGIA,
TOOTHACHE, SCIATICA, AND ALL NERVOUS DISORDERS.

Consisting of Lairitz Pine Wool Oil, Bath Extracts, Soaps, Wadding, Knee Caps, Foot Soles, Body Belts, Chest Protectors; also Flannels, and all descriptions of Ladies' and Gents' Underclothing.

CAUTION.—None Genuine without Trade Mark and Signature.

Sold by all Chemists and Druggists; also of all Drapers, Hosiery, and Warehousemen.

Lairitz

Preparations to be obtained Wholesale of all Leading Houses. Fabrics from WELCH, MARGETSON & CO., 18 Cheapside, E.C.

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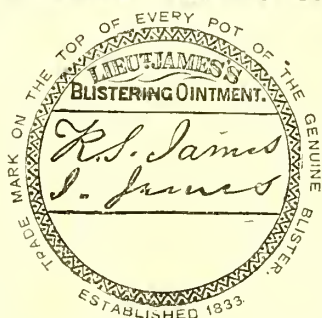
ESTABLISHED 1833.

HORSES.—LIEUT. JAMES'S BLISTER.

CAUTION.

The annexed Label is at the top of every Pot of the ORIGINAL and only GENUINE BLISTER.

The Messrs. Barclay & Sons, 95 Farringdon Street, London, and Messrs. Raimes & Co., Edinburgh, are now and have been Agents 54 years.



AGENTS:—Sutton & Co., 10 Bow Churchyard; W. Edwards & Son, 157 Queen Victoria Street; Newbery & Son, 37 Newgate Street; Evans, Lescher & Evans, Bartholomew Close; Burgoine, Burdighes & Co., 16 Coleman Street; Lynch & Co., 171A Aldersgate Street; Southall Brothers and Barclay, Birmingham; R. Hovenden & Sons, 93 & 95 City Road, Finsbury; Sanger & Son, 150 Oxford Street; Millard & Sons, 40 Charterhouse Square; Corry & Soper, Slad Thames; A. A. Campbell, Leadenhall Street, London; Woolley, Sons & Co., 59 Market Street, Manchester; Anthonies Company, Virginia St., Glasgow; John Thompson, 53 Hanover Street, Liverpool; Boileau & Co., Bridge Street, Dublin; McMaster & Co., 121 & 122 Capel Street, Dublin; Clarke & McMullen, Victoria Street, Belfast; D. Galbraith, Londonderry; M. C. Delaer, Pharmacie Anglaise, Bruxelles.

And by all Chemists, in Pots, 1/6, 2/9, 5/9, and 16/.

COLONIAL AGENTS:—MELBOURNE and WELLINGTON: Feltor, Grimwade & Co.; SYDNEY, BRISBANE, and LAUNCESTON: Elliott Bros. & Co.; DUNEDIN and AUCKLAND: Kempthorne, Prosser & Co.; CALCUTTA: Smith, Stanistreet & Co.

W. H. JAMES, SOLE MANUFACTURER, STANFORD, FARRINGTON, BERKS.

Advertised in "Bell's Life" 54 years. Beware of Spurious Imitations.

HORN & SON
 AUTHORISED AGENTS FOR PROCURING
PATENTS AND TRADE MARKS,
SOMERSET CHAMBERS, 151 STRAND, LONDON
 (NEXT TO SOMERSET HOUSE).
Guide to New Patent Law and Registration gratis.

S. SAINSBURY'S
 A Highly-perfumed Scent,
 prepared from the finest
ENGLISH LAVENDER,
 without any foreign whatever.
176 & 177 STRAND, LONDON.
Wholesale and Shipping terms on application.

ESCHMANN BROS. & WALSH, LONDON,
 INVENTORS AND MANUFACTURERS OF THE
SOFT SILK FLEXIBLE CATHETER,
WITH WOVEN EYES.
To be had of all Surgical Instrument Makers & Wholesale Houses.

WRITE FOR PRICE LIST OF
EBOLITE. PATENT GLASS. EARTHENWARE.
 (Unbreakable.) (Deep Ribs and Stout.) (Improved Pattern.)
FUNNELS
 ALL SIZES SUPPLIED. GOOD QUALITY LOW IN PRICE.
 SUITABLE FOR ALL TRADES.
 SPECIAL TERMS TO WHOLESALE BUYERS
AYRTON & SAUNDERS, LIVERPOOL.

E. BRAMWELL & SON, ST. HELENS, LANCASHIRE.
EPSOM SALTS (PURE).
CREAM CAUSTIC SODA.
SULPHITE OF SODA
 (PHOTOGRAPHIC AND COMMERCIAL).
GLAUBER SALTS.

"LA BRILLANTINE"
METALLIC POWDER (REGISTERED)
 Is the best, cheapest, and most effective Powder for cleaning and polishing Metals and Glass (specially Brass). It is used by the LIFE, HORSE, and DRAGOON GUARDS, the FIRE BRIGADES, &c., &c. Sold in 6d. and 1s. Boxes.
Proprietors: J. F. BAUMGARTNER & CO.,
 22 Newman Street, Oxford Street, LONDON, W.

TYPKE & KING,
 22 Laurence Pountney Lane, E.C.
 Manufactories—MITCHAM & RAINHAM.
 Pure Acids—Valerianic Acid and all Valerianates. Antimony Golden Sulphuret, Antim. Crocus Lump, and Powder. Essences of Pear and Pineapple. Potassium Cyanide. Nitrate of Ammonia, crystal and granulated. Potass. Sulphid. Iron Perchloride, solid and solution. Hypophosphites of Lime, Manganese, Soda, Potash, &c.

LINT.
THE LIVERPOOL PATENT LINT CO.
 MARK STREET MILLS,
 NETHERFIELD ROAD NORTH,
LIVERPOOL.
 See Advertisement.

PRECIPITATED CHALK, WHITEST AND PUREST.
 CHEAPEST SELLERS IN THE MARKET.
 ALSO CHEMICALS, DRUGS AND OILS.
 APPLY TO
AUG. LEVERMORE & CO.
 8 LIME STREET, LONDON, E.C.

PRIVATE TUTOR.
MR. JAMES W. SAUNDER
 (From the Royal School of Mines),
ASSISTANT PUBLIC ANALYST, ASSAYIST, &
6 ROCHESTER SQ., CAMDEN RD., N.W.
 Reads with gentlemen preparing for all examinations. No classes or demonstration but individual personal attention. Fees moderate. Chemical and Microscopic Analyses undertaken.
 Laboratory—65 EUSTON ROAD, KING'S CROSS, N.W.

PETROLEUM JELLY,
 EQUAL TO AND CHEAPER THAN VASELINE.
SANITARY FLUID AND SHEEP DIPS
 THE CHEAPEST AND BEST DISINFECTANT.
 GREASE, PITCH, ASPHALTE, AND ALL PRODUCTS OF TAR AND ROBIN.
Samples and Prices on application.
GRINDLEY & CO., POPLAR, LONDON, E.

ANALYTICAL AND CONSULTING CHEMIST.
GEO. LOGAN RAIT, F.C.S., &
 Laboratory—31 MOORGATE ST., LONDON, E.C.
Assistance given to Manufacturers and others requiring Chemical knowledge.
Fifty per cent. discount allowed to the Trade.

HARSTON & CO., LEEDS
GINGER ALE
 From PURE JAMAICA GINGER ROOT.
 SELTZER, POTASS, LITHIA, SODA WATER, LEMONADE
 FOR HOME OR EXPORT.

On Receipt of a Post Card we shall be pleased to forward to any address, FREE OF CHARGE AND CARRIAGE PAID a Trial Sample of

E. Cui Choua Lig. (DeVry)
FLETCHER, FLETCHER & STEVENSON,
 North London Chemical Works, Holloway, London, N.

ORANGE WINE
 (VIN. AURANT., F.B.)
 Specially brewed for Quinine Wine, does not deposit. Is well adapted for Export as it will keep good in any climate. In casks, 13, 27, 56, 112, 140 gallons; small casks 3s. 9d. per gall., carriage allowed. In wine bottles (not less than 3 doz.), 8s. per doz., including bottles. Cases extra and returnable.
Sample six stamps. Special quotations to large buyers.
GEO. DURRANT & CO., Hertford.

HONEY-DROP—FOR THE SKIN
 Retail—6d., 10d., 1/6, and 3/-
 This splendid preparation, which is selling immensely, can be had wholesale from
W. EDWARDS & SON, LONDON; EVANS, GADD & CO., EXETER
 Sole Proprietor and Manufacturer,
GEORGE STOCKER, CHEMIST, EXETER.

SY. FERRI PHOSPH. CO.

42/ PER CWT.

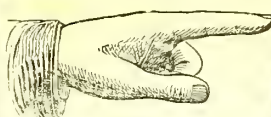
FULL STRENGTH GUARANTEED. SAMPLE FREE.

BERICK & SON, Wholesale Druggists, CARDIFF.

The best Agreeable and Rapid Remedy for Asthma, Consumption, Cough, Colds, Bronchitis, Throat Affections, Shortness of Breath, and all Disorders of the Chest is



Prepared only by DA SILVA & CO., 26 Bride Lane, Fleet Street, LONDON. Sold by all Druggists at 1/12, 2/9, 4/6, and 11/ per box.



ARMBRECHT'S COCA WINE.

AGENTS APPOINTED.
2 DUKE ST., GROSVENOR SQUARE.

FREDK FINK & CO.,

10 & 11 MINING LANE, LONDON, E.C.

SPECIALITIES: Glycerine—Gum Arabic—Gum Tragacanth—Pure Beeswax—Honey—Vanilloes.

The Most Extensive Peppermint Works in the World. Estab. A.D. 1869. Expositions Internationales Grand Prize Medals.

A. M. TODD, GROWER, DISTILLER, and REFINER of CRYSTAL WHITE OIL TRUE PEPPERMINT

Double Distilled, Distilled and Refined by Steam.

The quality is now offered through the leading Wholesalers of Great Britain at Special Introductory Prices, in sealed and guaranteed Bottles of 500 grams, 1 lb., 8 oz., and 4 oz., and 20 lb. Tins.

The Manufacturer POSITIVELY GUARANTEES it not only ABSOLUTELY PURE and IN EVERY RESPECT THE HIGHEST QUALITY MANUFACTURED, but also the MOST PROFITABLE in use—less being required, whilst the highest possible result are uniformly and quickly obtained.

PLEASE SPECIFY "A. M. TODD'S CRYSTAL WHITE" IN YOUR NEXT ORDER.

Nice its unequalled purity, strength, aroma, solubility, and entire perfection of manufacture. The benefit derived from your trial will be reciprocal and permanent. SEE LARGER ADVERTISEMENT IN NEXT ISSUE.

SPECIAL AGENTS—Burgoyne, Burbidges & Co., London; James Woolly, Sons & Co., Manchester.

GENUINE EAST INDIA MUSTARD SEED OIL

GUARANTEED ABSOLUTELY PURE AND UNADULTERATED.

The ordinary 1/- size, 50/- a gross; also an extra large size, to be retailed at 2/-, at 90/- a gross, leaving a good margin profit to the retailer. As it is now universally being advertised, there is setting in an increased public demand.

IMPORTANT CONCESSION!!!—Note: On all first orders for an original case of each size, an extension of credit of six months will be afforded, thus enabling the retailer to secure all the benefit of selling every bottle before paying a single shilling out of his own pocket.

Artistic Window Tablets, Stationery, &c. with each order.

CERTIFICATE OF ANALYSIS.

"I hereby certify that this is a genuine unmixed Mustard Seed Oil.—(Signed) A. NORMAN TATE, F.I.C., F.C.S., Liverpool, August 8, 1887."

NEW AMERICAN OIL OF PEPPERMINT, NOT deprived of its Menthol, 10s. 6d. per lb. In original 22-oz. bottles. Packages free. If order is accompanied by P.O.O. for 15s. an original sample bottle of the Mint will be forwarded, carriage paid, per Parcels Express, TO ANY PART OF THE WORLD.

CHILIAN HONEY—½-cwt. tins, 3d. per lb.

Non-freezing, Finest Norwegian COD-LIVER OIL, guaranteed premier quality; 25-gallon tin-lined barrels for £5, or in 4½-gallon tins at 4s. 6d. per gallon.

DRUGGIST'S WHITE GLYCERINE, 12·60—9d. per lb., 60-lb. tins (expected to be dearer).

ESS. LEMON (NEW)—4s. 6d., 10-lb. tins.

DALMATIAN INSECT POWDER in Original 28-lb. tins at 1s. 2d. per lb.

P. RHEI, E.I. ELECT.—7-lb. bottles, 3s. per lb.

SENNA T.V.—56-lb. bags, 3¼d.; and 2-cwt. bales, 3d. per lb.

CIRCISSIAN OIL—40-gallon barrel, bright and clear as

COLZA OIL—1s. 6d. per gallon (for Hair Oil, &c.); sample 9-gallon tin, for 15s.

Special—PETRO. JELLY (firmer than VASELINE)—4d. per lb., 40-lb. tins.

GRANULAR EFFERVESCENT CITRATE OF MAGNESIA—at 8d. per lb., for not less than 28 lbs.

PURE CRYSTAL MENTHOL CONES, MOUNTED in neat turned-wood boxes for the pocket. 1 gross sent free, per Parcels Express, TO ANY PART OF THE WORLD on receipt of P.O.O. for 21s.; id est—144 sixpenny size delivered free at 1¼d. each.

NOTE.—All PACKAGES FREE, and delivered to RAILS FREE.

GOOD MERCHANTABLE QUALITY GUARANTEED.

E. R. BANNER, Drug Merchant, 56 Boaler St., LIVERPOOL.

PROCTER'S LIQUID GLUE

A PERFECT CEMENT.
FOR MENDING EVERYTHING.

Such as Wood, Glassware, China, Earthenware, Crockery,
Porcelain, Leather, Coral, Zylonite, Ivory, &c.

No preparation or heating required. Always ready for use.

LONDON AGENTS—

WM. COLLINS, SONS & CO., LIM., LONDON, E.C.

J. H. WINKELMANN & CO., PROPRIETORS
BALTIMORE, Md., U.S.A.

W. H. B. REFINED
W. H. B. WHITE

BEESWAX

Bernard Dyer,
B.Sc. (Lond.), F.C.S.,
F.I.C., Analytical
and
Consulting Chemist.

LABORATORY,
17 Great Tower
Street.

I have analysed a cake of Wax stamped
W.H.B. sent to me by a London House
on behalf of Messrs. W. H. Bowdlear &
Co., of Boston, Mass., U.S.A. It consists
of pure bleached beeswax unmixed with
paraffine, fat, or other of the various
materials with which beeswax, and
especially white wax, is commonly adulterated.

Bernard Dyer, B.Sc., F.C.S., F.I.C.,
Member of the Society of Public Analysts.

CABLE ADDRESS—"BOWDLEAR BOSTON."

Our goods may be obtained in
case lots of any of the
Wholesale Druggists in the North
and Midland Counties, and
LOTHOUSE & SALTHER,
COLTHURST & HARDING, BRIS
GOODALL, BACKHOUSE & CO., LE
GLASGOW APOTHECARIES COMP.
Glasgow.

We will deliver our Goods in 5
lots or quay, in any City within
the Terminals of a Steamship
throughout the Kingdom.

W. H. BOWDLEAR & CO
147 Pearl Street, BOSTON, MASS., U.S.A.

B. NOAKES & CO.

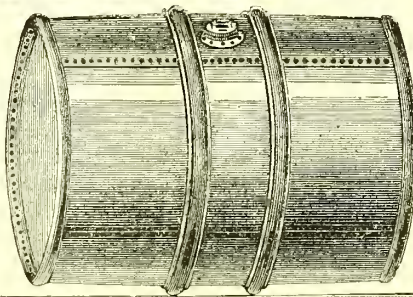
MANUFACTURERS OF
METALLIC CASKS, DRUMS, & KEGS,
AND OF THE AIR-TIGHT



PATENT SELF-FIXING TINS.

IRON BARRELS,
CAPACITY 40 TO 120 GALLONS
AN PER ILLUSTRATION.

Cable and Telegraphic Address—"NOAKES LONDON."



These large Iron Casks, similar to sketch,
be handled with equal facility to wooden bar
and, owing to their strength and durability,
be used over and over again for an indefi
nite period. They are perfectly liquid tight, b
tested at a very high air pressure, and, m
wood, do not absorb any of the contents. T
are all fitted with interchangeable screw bu
and can also be fitted with screw plug in h
for draw-off tap.

They are specially adapted for all kind
Chemical Products, Sulphuric Acid, Glyce
Spirits, Oils, Turpentine, Petroleum, Benzo
Varnishes, Tar, Naphtha, Mineral Extracts,
Inflammable Liquids of every description.

We are making them in three qual
"Black Iron," "Lead Coated," and "Tinne

PRICE LIST ON APPLICATION.

Offices and Works: 142 SPA ROAD. BERMONDSEY, LONDON, S.

IMPORTANT NOTICE TO CHEMISTS AND DRUGGISTS.

Inland Revenue, Somerset House, London, W.C., 24th September, 1887.
Sir,—In reply to your letter dated the 23rd ultimo, I am desired by the Commissioners of Inla
Revenue to inform you that a Wine Licence will not be necessary for the sale of Beef Wine prepar
after the same method of composition as that employed in the case of the sample forwarded by y
for analysis on the 2nd ultimo, and having on the bottle a label similar to that then sent up.

The Manager, Liebig's Wine Co.,
66 and 68 Highfield Street, Liverpool.

I am, Sir, your obedient servant,

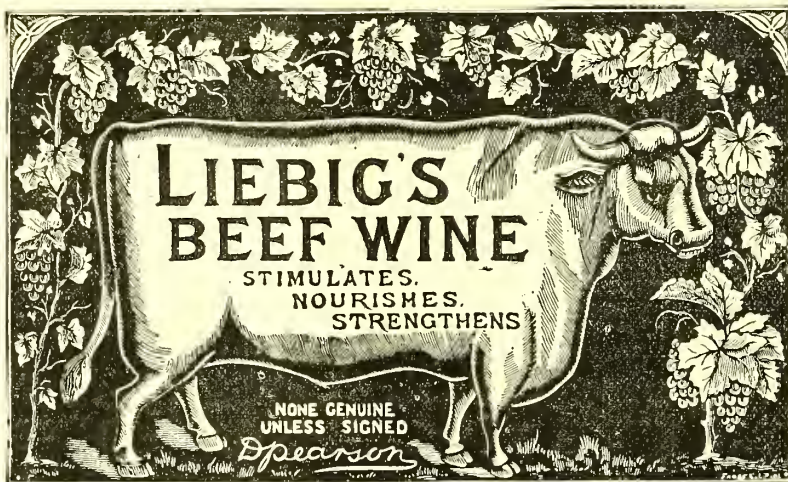
ROBERT MICKS, Sec.

A WINE LICENCE IS, THEREFORE, NOT NECESSARY FOR SELLING LIEBIG'S BEEF WINE

PRIZE MEDALS AWARDED—
LIVERPOOL & GLASGOW, 1886 & 1887.

It is guaranteed that One Glass of Liebig's Beef
Wine contains more Nourishment and Strength
than Ten Glasses of any other Wine.

JUSTLY FAMOUS FOR ITS HEALTH-
GIVING QUALITIES.



LIEBIG'S BEEF WINE gives nutrition to the system and
tone to the stomach, on account of its rapid absorption, and
containing as it does, the nutritious elements of meat in a
most concentrated and palatable form, it offers the best
mode of supplying strength to the weak, exhausted, and
depressed. The chief ingredients of Liebig's Beef Wine are
Choice Port or Sherry Wine, Extract of Beef, Quinine, and
Extract of Malt, mixed together in exact proportions to
form the most invigorating and strengthening food food

LIEBIG'S BEEF WINE (A).—Chief Ingredients: Essence of
Beef, choice Port Wine, Extract of Malt, and Quinine.

LIEBIG'S BEEF WINE (B).—Chief Ingredients: Essence of
Beef, choice Port Wine, Extract of Malt, Quinine, and Iron.

LIEBIG'S BEEF WINE (C).—Chief Ingredients: Essence of
Beef, choice Port Wine, Extract of Malt, and Peppine.

2s. 9d. SIZE (PINTS), 21s. per dozen; 4s. 8d. SIZE (QUARTS), 39s. per dozen.

LIEBIG'S NON-ALCOHOLIC BEEF WINE (D)
Chief Ingredients: Essence of Beef, Grape Juice, or Non-Alcohol

Wine, Extract of Malt, and Quinine, in pints only 21s. per dozen

* An unfermented still wine, warranted to be the pure juice of the grape, only
to keep good in any climate without fermentation.—See Handbook.

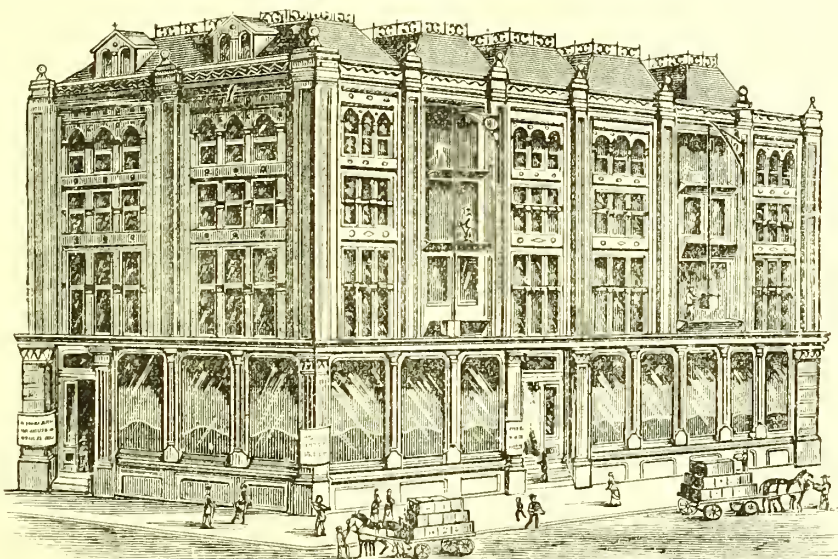
If preferred the Beef Wine can be made, in each case, with Sherry instead
of Port, or without Quinine.

Sole Manufacturers—LIEBIG'S WINE CO., 66 & 68 Highfield St., Liverpool, & 12 St. Helen's Place, London, E.

HESELTINE'S

THE PREMIER TEA OF INDIA AND
CEYLON, IS THEIR SPECIAL IMPORTATION
AND THE PERFECTION OF TEA.

REGISTERED "TAPRABUNDA" TRADE MARK.



OFFICES AND DUTY PAID WAREHOUSES.

For Retail at 1s. 8d., 2s., and 2s. 6d.

In Lead Packets, $\frac{1}{4}$ lb., $\frac{1}{2}$ lb., and 1 lb.

Terms of Agency, and Samples of the Tea, on application.

WM. HESELTINE & SON,

56 Wilson Street, and 1 & 3 Earl Street, Finsbury,

LONDON, E.C.

AGENTS WANTED WHERE NOT ALREADY REPRESENTED.

EVERY CHEMIST & DRUGGIST

Should write for samples and terms (post free) of the Delicious Spring Blossom Ceylon Tea. This valuable and profitable agency is worth securing. Handsomely and specially packed for Chemists' sale in air-tight canisters by

CAVE, JOHNSON & CO., WHOLESALE TEA AND COFFEE DEALERS, **8 LIME ST., LONDON, E.C.** ^[1]

CHEMISTS' TEA AGENCY.

WALKER & DALRYMPLE'S

BROKEN-LEAF TEA, 1s. 8d. per lb.
A MONEY SAVING TEA. ABSOLUTELY PURE.
 The small leaf from some of the finest India and China Teas. Produces a Tea in the cup, stronger, richer, and cheaper than most whole-leaf Teas. Agents appointed, where unrepresented, throughout the United Kingdom.

WALKER & DALRYMPLE'S

INTERMEDIATE TEA, 2s. per lb.
BEST at the PRICE EVER SOLD. Great strength and a most useful Tea where there is a large consumption. Recommended to all who wish to SAVE in their Tea. Agents appointed, where unrepresented, throughout the United Kingdom.

WALKER & DALRYMPLE'S TEAS.—

AGENTS APPOINTED, where unrepresented, throughout the United Kingdom.

Prospectus and Samples Free on Application.
 Warehouses, 154, 155, 159 and 160 WHITECHAPEL ROAD, and
 2, 4, 6, 8, 10, 11, and 12 BRADY STREET, LONDON,
 P.O.O. payable at head office. Bankers, the National Provincial Bank of England.

TOOTH BRUSHES.

For quotations of all descriptions see Druggist Sundries List of undersigned.

See Advertisement, page 5.

EVANS, SONS & CO

LIVERPOOL.

LONDON:

EVANS, LESCHER & WEBB,
 60 Bartholomew Close.

CANADA:

EVANS, SONS & MASON, LI
 Montreal, Toronto, and Victoria
 British Columbia.

TEA from China, India, Ceylon, Java, &c., also every variety or grade of COFFEE

PEARSE & WHEATLEY, 42 MINCING LANE, LONDON, E.C.

(Telegraphic Address—PACIFICUS LONDON.)

SPECIAL BLENDS OF TEA—

(Duty-paid prices quoted.)

In Boxes, 20 lbs. or 40 lbs.; $\frac{1}{2}$ -Chests, 60 lbs.; or Chests, 100 lbs. 60 lbs. carriage paid to any Station in England or Wales. Terms—Net Cash with order.

CEYLON TEAS (PURE)—
IN LEAD PACKAGES ($\frac{1}{4}$ -lb., $\frac{1}{2}$ -lb., or 1-lb.)
 Most attractively labelled.

No. 1, 1/	No. 2, 1/2	No. 2a, 1/3	No. 3, 1/4	No. 3a, 1/5	No. 4, 1/6	No. 4a, 1/7½	No. 5, 1/9	No. 6, 2/	X, 2½
1/4	1/6	1/8	1/11	2/2	2/6				

Duty-paid prices.

(For Export under Bond, 6d. per lb. 1s.)

FINE COFFEES (Roasted)—

1/1	1/1½	1/2	1/3	1/4	Choicest Mocha or Mysore, 1/5
-----	------	-----	-----	-----	-------------------------------

In 28-lb., 56-lb., or 112-lb. Bags; also supplied Raw or Ground. Cash, less 2½ per cent. discount.

THE NEW FRENCH COFFEE—CAFE FRANCAIS

to sell at 10d., 1/ 1/4, and 1/6, in $\frac{1}{4}$ -lb., $\frac{1}{2}$ -lb., and 1-lb. Canist
 Most tastefully labelled without any firm's name appearing.
 Export Department.—Teas or Coffees in Bond. Shipped to any part of the world. Terms, f.o.b. London against banker's credit or remittance.
 Samples, Price Current, and every information on application with pleasure.

GIBSON'S DELECTABLE JUJUBES, VOICE JUJUBES, & GLYCERINE PASTILLE

Put up in 4-lb. Decorated Tins with Glass Lids, Tins free, are now being inquired for by buyers from all parts of the world.
 They are not surpassed in quality by any maker, and give entire satisfaction.

MEDICATED AND HIGH-CLASS LOZENGES, OF EVERY KIND, sent out in 2-lb. or 4-lb. Bottles, Bottles Free; or in Tins, from 10-lb. upwards.
 Lime Juice Tablets, Malt Tablets, Acid Drops, and Best Quality Boiled Sugars of every kind.

CHLORODYNE JUJUBES AND CHLORODYNE LOZENGES.
 PENNY SUGAR WORM CAKES, suitable for either children or adults. Have an immense sale, keep in any climate, and please everybody. Manufactured by
ROBERT GIBSON, Carlton Works, Hulme, MANCHESTER, & 1 Australian Avenue, LONDON.
 Price Lists sent on application. Our Goods can be bought through any Wholesale or Export House in London.

THE NEW DIETETIC EFFERVESCENT

KEF.

MILK DRINK.

The most easily assimilated Food in Wasting Diseases.
 PREPARED AND DELIVERED DAILY BY THE

SOLE MANUFACTURERS,

TRADE MARK: 'HEBE'. **SPRING & CO., 21 Blenheim Road, N.W.** TRADE MARK: 'HE'

MITRE TEA.

KEARLEY & TONGE.

MITRE SQUARE,
& ST. JAMES'S PLACE
LONDON E.C.



REGISTERED TRADE MARK.

IN UNIVERSAL REQUEST.

VALUABLE AGENCY.

The Mitre "Broken Leaf" Tea-	-	To Retail at 1/8
The Mitre "Thrift" (Whole Leaf) Tea -	-	1/8
The Mitre "Kee-mun" Mixture-	-	2/-

Wrapped for the Trade in $\frac{1}{4}$ -lb., $\frac{1}{2}$ -lb., and 1-lb. Parcels.

Coloured Show Cards, Enamelled Iron Tablets, Posters, Window Transfer, and Handbills, with Agent's Name on, supplied free. Newspaper and Railway Station Advertisements to suit the requirements of Agents. Applications for Agencies where unrepresented will receive prompt attention. Price Current and Pamphlet, with Terms, post free.

KEARLEY & TONGE, MITRE SQUARE, **LONDON, E.C.**
ALDGATE,

SALUBRIOUS SALINE,

AN EXCELLENT

PYRETIC

AND

ANTIBILIOUS EFFERVESCING SALINE.

J. BEEDZLER & CO.'S
LONDON

J. BEEDZLER & CO.'S
LONDON

In a suit "Lamplough v. Beedzler & Co.," in the High Court of Chancery, heard before the Master of the Rolls (Sir George Jessel), a verdict was immediately given in favour of Messrs. J. BEEDZLER & Co.; also in the Appeal Court before Lords Justice James, Cotton, and Lush, the decision was again in favour of Messrs. J. B. & Co.—*Vide Daily Papers and Medical Journals.*

Small size, 1/-; 3 dozen for 24/-

Large size, 2/6; 1 dozen for 20/-

J. B. BEEDZLER & CO.'S
LONDON

BLOOD MIXTURE

The OLDEST and GENUINE.

ONE HUNDRED YEARS' REPUTATION.

J. BEEDZLER & CO.'S
LONDON

Small size, 1/1½; 3 dozen for 24/-

Large size, 2/9; 1 dozen for 20/-

J. BEEDZLER & CO.'S
LONDON

ANNETT'S

COUGH BALSAM

J. BEEDZLER & CO.'S
LONDON

Small size, 1/1½; 3 dozen for 24/-

Large size, 2/9; 1 dozen for 20/-

J. BEEDZLER & CO.'S
LONDON

HOPS

PODOPHYLLIN, BUCHU, DANDELION,

AND

BITTERS.

J. BEEDZLER & CO.'S
LONDON

A 1/- Packet makes a Quart.

Small size, 1/-; 3 dozen for 24/-

Large size, 2/6; 1 dozen for 20/-



LYNCH'S IMPROVED

PRIZE MEDAL,

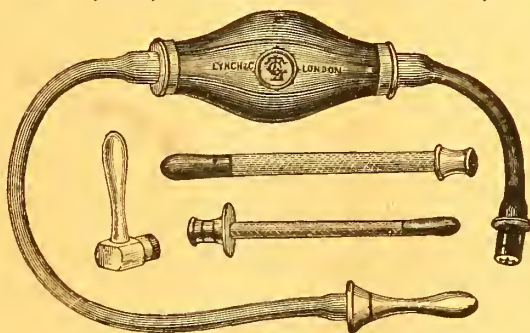


SYDNEY 1879.

FAMILY ENEMA

(Patent 13,816, dated 12th October, 1887).

In
Mahogany Box
Lined
with Velvet,
per dozen,
49/-



In
Slide Cedar Box,
per dozen,
43/-

Less usual Discount.

LYNCH & CO. have long recognised the imperfect nature of the Valves hitherto employed in the construction of Enemas, and their liability to destruction from contact with greasy matter, from clogging, and even in some cases actually rusting in the Valvular Chamber.

In the employment of Glass they have secured a material not only free from the foregoing defects, but combining all the essentials of incorrodibility, cleanliness, and perfect continuous action.

The Valves are so situated, being placed at the extremity of both inlet and delivery tubes, as to admit of their ready removal and replacement, if desirable; and being WITHIN the Indiarubber are perfectly protected from any possibility of breakage.

The simplicity of the Apparatus, the entire absence of complication, and the extremely moderate price warrant the Inventors in hoping for its universal adoption.

MAY BE HAD WHOLESALE OF THE PATENTEES—

LYNCH & CO., 192 ALDERSGATE STREET, LONDON, E.C.

AUSTRALIAN BRANCH—15 Vaughan's Chambers, 48 Queen Street, MELBOURNE.

SHOWROOM.

We have now completed the restoration of our premises, and shall be pleased to see any of our country friends visiting London. Our Showroom contains samples of all staple goods and the most recent novelties, and we are fain to hope will prove of interest to intending purchasers.

26th November, 1887.

LYNCH & CO.

" OBERBRUNNEN " MINERAL WATER.

Rich in Lithia and Soda Salts.

An alkaline saline of a chemical composition, quite special and peculiar.

The chief constituents are the bicarbonates of lithia, soda and iron, sulphate of soda, and free carbonic acid gas. The flavour of the water is refreshing, moderately pungent, tasting pleasantly of carbonic acid gas, soft and slightly chalybeate.

As a remedial agent is well known to be very successful in the following conditions:—

GOUT.
URIC ACID DIATHESIS.
GALL STONES.
HEPATIC DERANGEMENTS.

INTESTINAL CATARRH.
ANÆMIA. CHLOROSIS.
THROAT AFFECTION.
LARYNGEAL CATARRH.

PULMONARY EMPHYSEMA.
TUBERCULAR DIATHESIS.
SCROFULA.
RICKETS.

Pamphlets containing Medical and Analytical Reports on application to the

SOLE IMPORTERS FOR THE UNITED KINGDOM—

INGRAM & ROYLE,

LONDON: 52 Farringdon St., E.C. LIVERPOOL: Finney Lane. BRISTOL: Bath Bridge.

Trade Price, 40s. per Case of 50 Bottles, or 10s. dozen, less 5% Cash. CARRIAGE PAID.

CADBURY'S COCOA ESSENCE

you get it when asked for, as imitations are often pushed for the sake of extra profit.

"We have carefully examined the samples brought under our notice, and find that they are genuine, and that the Essence of Cocoa is just what it is declared to be by Messrs. Cadbury Brothers."—*Lancet*.

"Cocoa treated thus will, we expect, prove to be one of the most nutritious, digestible, and restorative of drinks."—*British Medical Journal*.

GUARANTEED PURE AND SOLUBLE.

The medical profession order Cadbury's Cocoa Essence in thousands of cases, as the most wholesome beverage. Be sure

EASY
TEETHING.

DO NOT LET YOUR CHILD DIE!

Fennings' Children's Powders Prevent Convulsions; are Cooling and Soothing.

FENNINGS' CHILDREN'S POWDERS,

For Children Cutting their Teeth, to Prevent Convulsions.

Sold in Stamped Boxes, at 1s. 1½d. and 2s. 9d. (great saving), with full Directions.

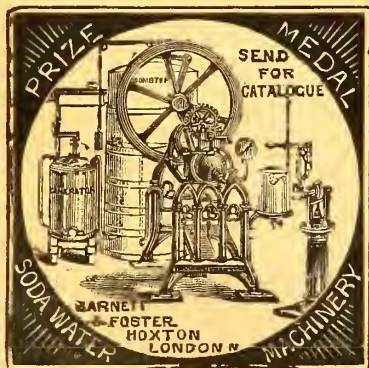
Do not contain Calomel, Opium, Morphia, nor anything injurious to a tender babe.

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A complete Soda Water Plant, including Bottling Machine, for producing 100 dozen Lemonade, Ginger Beer, Ale, &c., per day, is supplied for £40.

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THE CHEMIST & DRUGGIST

SUPPLEMENT.

Businesses Wanted.
Businesses for Disposal.
Remises to Let.
Auction Sales.

SATURDAY, JANUARY 14, 1888.

Partnerships.
Situations Vacant.
Situations Wanted.
Miscellaneous.

ADVERTISEMENTS for this Supplement can be received on FRIDAY MORNING, first post, though it is requested that they may be sent in as early in the week as possible.

EXCHANGE COLUMN ADVERTISEMENTS appear on page 20 (bottom folio), and must be received not later than THURSDAY AT NOON, to appear in the issue of the Saturday following.

All Advertisements for this Supplement and Exchange Column must be prepaid. Remittances payable to EDWARD HALSE, and crossed MARTIN & CO

OFFICES: 42 CANNON ST., LONDON, E.C.

EXCHANGE COLUMN FORMS

Can be had on application to the Publisher, at the Offices, 42 Cannon Street, London, E.C.

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MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C.

CHEMISTS' TRANSFER AGENTS,

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

The Business conducted by Messrs. ORRIDGE & Co. has been known as a Transfer Agency since the year 1848, and is well known to all the leading firms in the Trade. VENDORS have the advantage of obtaining an opinion on value derived from extensive experience, and are in most cases enabled to avoid an infinity of trouble by making a selection from a list of applicants for purchase, with the view of submitting confidential particulars to those alone who are most likely to possess business qualifications and adequate means for investment. PURCHASERS who desire early information regarding eligible opportunities for entering business will greatly facilitate their object by describing clearly the class of connection they wish to obtain.

1.—LONDON, S.E.—Dispensing and Light Retail Business, established many years; present receipts over £400 yearly; attractive and well fitted shop, and comfortable house with private entrance; rent £70 lease; price about £750.

2.—LONDON, S.E.—Retail and Dispensing Business; receipts average £500 yearly, with good profits; single-fronted shop; house has seven rooms and shop, with good cellarage and yard; price £350.

3.—LONDON SUBURB, S.E.—Retail and Dispensing; established about seven years; returns (gradually increasing) about £500; no immediate opposition; well fitted shop and good stock; good-sized shop in a roomy house held on lease; small garden attached; price to be arranged.

4.—LONDON, W.—Retail, Dispensing, and Prescribing; established upwards of 20 years; returns £650; has post-office attached; double-fronted shop, well fitted and attractive; 10-roomed house, with private entrance; price £650.

5.—SOUTH COAST.—Business town; very old-established business; Dispensing, Prescribing, and Mineral Waters; returns between £1,900 and £2,000 yearly; good opportunity for two gentlemen as partners; good business premises and roomy residence; rent very moderate, held on lease; garden, &c.; price £1,700.

6.—WORCESTERSHIRE.—Large town; an established good-class Business; purchasers prepared to invest about £1,800 are invited to apply; references will be given and required; all in strict confidence.

7.—NORTHAMPTONSHIRE.—Small market town; a *bond-fide* Business; small business returning £340 last year; vendor, going into Wholesale, will give an introduction; price, including stock and fixtures, &c., £275.

8.—ISLE OF MAN.—Dispensing and Retail, with fancy trade; no heavy business; an old-established concern held by vendor 12 years; returns £1,600 last year; no cutting or stores; capital position; house, facing the sea, contains 7 rooms and shop; rent moderate; lease to be granted direct; price £950 cash.

9.—CHESHIRE.—Large town; an old-established Business held in late owner's family for many years; an immediate purchaser required; present returns are about £500, but have been upwards of £1,000; roomy house, capital warehouse room; rent low; sum required is about value of stock and fixtures.

10.—CATHEDRAL CITY (WEST).—Handsomely fitted shop with profitable business, Dispensing and good Proprietary medicines having a large sale; for disposal in consequence of vendor's continued ill-health; returns average about £700 yearly; house is large and well situated (vendor's own); lease will be granted; price £750; full investigation invited.

11.—KENT (EASY DISTANCE OF TOWN).—Prescribing and Retail; established over 20 years; returns £500, very profitable; well-fitted shop and good stock; comfortable house on lease; price £500, or fair offer will be entertained.

12.—SUNDERLAND.—Dispensing, Retail, &c.; *bond-fide* concern; well-fitted corner shop; returns over £500 yearly with good profits; convenient house with yard and garden; price about £500.

N.B.—NO CHARGE TO PURCHASERS.

Other Businesses, Town and Country; particulars free on application. Personal applicants receive Messrs. O. & Co.'s direct attention and advice, where required, free.

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Gentlemen purchasing businesses frequently do not employ a valuer in their own interest, but are often guided by the advice of a valuer paid by the seller, a commission depending in amount on the sum received. Is this wise?

P. C. B. desires to act either for the Seller or the Buyer on the usual terms, but in no case will he advise on both sides.

A selection from the list of Businesses for Disposal will be advertised in this column free of charge.

TENDER.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

In Bankruptcy.

TO CHEMISTS, DRUGGISTS, FURNITURE BROKERS, AND OTHERS.

HIGHLY important sale of a large stock of drugs, patent medicines, scents, fixtures and fittings, household furniture, engine boiler, shafting, and other effects, now on the premises known as 121 Westgate Street, St. Mary's Street, and 52 Northgate Street, Gloucester, late the property of Albert A. Curtis, Chemist, Druggist, &c.

The following Tenders are invited: (No. 1)—For all the stock of drugs, patent medicines, scents, &c., and other shop goods at 121 Westgate Street. (No. 2)—The shop fixtures and fittings. (No. 3)—Engine boiler and machinery (No. 4)—All the household furniture, office fittings, &c. (No. 5)—All the drugs, patent medicines, scents, and other shop goods at 52 Northgate Street; and (No. 6)—All the shop fittings, fixtures, furniture, &c., there, as per inventories to be seen on the premises; such tenders to be sent to Mr. W. C. Hardman, 30 Brunswick Road, Gloucester, on or before Saturday, the 21st day of January, 1888, marked Tenders "*Re A. A. Curtis.*"

BUSINESSES FOR DISPOSAL.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

TO Chemists and Dentists.—A thoroughly good Dental and Prescribing Business, established 1844, in good thoroughfare, near railway station; price £200; an offer invited. Apply, Mr. C. Harrison, 158 City Road, Manchester.

CHEMIST'S Business for sale, £80, goodwill, stock, and fixtures; excellent chance for anyone starting; good reasons for leaving; thickly-populated neighbourhood. B., 83 Derby Road, Nottingham.

WEST KIRBY, Cheshire (a health resort).—For immediate disposal, a Family Dispensing Business; returning £455 per annum, and about this amount is asked from incoming tenant; satisfactory reasons for disposal. For further particulars apply to F. B. & N., 11A Lord Street, Liverpool.

AN old-established Business, in a rising seaside watering-place; pop. 5,000; only one other Chemist within 10 miles; splendid opportunity for a young man; no examination necessary; no "stores"; brisk retail at full prices; returns steadily increasing; cash takings for 1887, £527; average for last 3 years, £505, besides booking; large shop, well stocked and fitted; domestic bereavement sole cause of sale; price £500, or goodwill and fixtures £200 and stock at valuation. Apply, "Ebor," care of Messrs. R. Sumner & Co., Wholesale Druggists, Liverpool.

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TO Chemists and Surgeons.—A first-class Chemist and Drug Business for immediate disposal; return £800 per annum; books open to inspection for past six years price for lease, fixtures, fittings, and stock, £400; valuation worth the money; proprietor retiring; £100 can remain required. Apply, Harcourt & Co., 38 Berners Street, Oxford Street, W.

WEST OF ENGLAND.—First-class Retail and Dispensing Business in principal thoroughfare of fair sized town; returning £1,000; net profit £400; good house long garden attached; cause of sale, leaving the trade price £850 or reasonable offer; principals only. By letter to "Morphine," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

NOTTINGHAM.—£100 cash; old-established business; populous district; splendid mahogany fixture handsome dispensing screen, window-cases, fair stock; thorough working order, doing upwards of 5% weekly (retail and some wholesale); has done 16%, but been neglected present owner has doubled in six months, and still increasing will bear strict investigation; having accepted good appointment abroad must sell at once; good corner shop; good house. Richardson, Chemist, Sneinton Road, Nottingham.

SITUATIONS OPEN.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

WANTED, Assistant, indoors, to visit and dispense unmarried; also an Improver. Apply personally 9 Wellington Street, Strand.

WANTED, a Junior Assistant; outdoors. Applying full particulars, to D. P. Roberts, Drug Store 131 North End, Croydon.

JUNIOR in a mixed Country Business (indoors); personal interview required. Johnson Cripps, Reephar Norwich, Norfolk.

MANCHESTER ROYAL INFIRMARY.

JUNIOR Assistant Dispenser required about January 23; Minor qualification; not over 30 years of age and unmarried; salary £80 per annum; hours 8.30 to Apply to General Superintendent.

WANTED, for the Far East, a qualified thorough competent Assistant, with ability and first-class business experience; liberal terms to an able energetic man aged 24 to 30, single. Address full particulars to A., care Housekeeper, 102 Fenchurch Street, E.C.

INVOICE Clerk wanted for Provincial Wholesale Drug House; good handwriting and knowledge of trade indispensable. Applicants must state age, previous experience, and salary required to A 45, care of C. Birch Advertising Agent, Liverpool.

ASSISTANT wanted for Agricultural trade; energetic and steady; one who can keep books and extra teeth preferred; age about 24. Apply, with references a photo, and state salary required (indoors), to W. Allis, Chemist and Grocer, Alford, Lincolnshire.

JANUARY 30.—A trustworthy indoor Assistant (qualified preferred), about 24, for a good-class country trade; must be a quick and accurate dispenser, and obliging Apply, with full particulars, enclosing photo if possible, "Coca," care of Messrs. Corbyn & Co., 300 High Holborn, London, W.C.

ASSISTANT Dispenser, in a London Hospital; an Assistant Dispenser, fully qualified; age not to exceed 40; salary £70 per annum and dinners. Apply, giving full particulars of qualifications and experience, with copies of recent testimonials, to N. P. E., 7 Claremont Square, Pentonville, N.

SITUATIONS WANTED.

1s. for twelve words; 6d. for every six words beyond.

LONDON or South-Eastern Counties.—Assistant, 25; qualified. H., Bank House, Framlingham.

Assistant; good experience and references; disengaged. 9 Mimosa Street, Fulham.

Assistant, with view to purchase; qualified. Brooks, 452 Oxford Street, W.

Junior or Improver; extracts teeth; tall; aged 24; abstainer; small salary; references. "Chemicus," 140 Spleton Road, Bristol.

Senior or Manager; outdoor; aged 38. Particulars to "Qualified," 114/16, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

Bookkeeper, Cashier, &c., in Wholesale or Manufacturing Chemist's; 17 years' experience; aged 33; disengaged. W., 10 Disraeli Road, Upton, E.

Manager, with view to purchase in about a year; town or country. "Pharmacist," 20 High Road, Ilburn, N.W.

Junior; 4 years' experience; some knowledge of Prescribing; careful dispenser. J. S. A., Rev. John Atkins, Wesleyan Minister, Cowbridge, Glamorgan.

Assistant (outdoors) or Manager; aged 24; 8 years' experience; good references. A. B., 2 Retreat, Underland.

Assistant; good-class Retail and Dispensing; disengaged. "Xylonite," 223 Old Cross Church Road,ournemouth.

Branch Manager; willing to invest small capital in a few months; town or country; disengaged 1st Feb. Minor," Corbyn & Co., 7 Poultry.

Part Time as Dispenser to Surgeon, Manager of Branch, or Assistant; first-class references. A. H. Wilkerson, Leighton Buzzard.

Assistant or Dispenser (Qualified); good town and country experience; height 5 feet 9 inches. W., 73 Mansfield Road, Aston, Birmingham.

Assistant or Branch Manager; aged 25; good varied experience. "Chemicus," 60 Titford Road, Langley, Birmingham.

J. MASON, now at liberty, Chemist's Temporary Manager, Cranham Street, Oxford; by week or month; mixed business not objected to; good references.

Immediately.—As Assistant; outdoors; qualified; aged 30. M., Brewer & Marston, Pharmaceutical Chemists, 105 London Wall, E.C.

Assistant; Major qualification; height 5 ft. 9 in.; good references; 7 years' experience. E. Goodfellow, Helpston, Market Deeping.

AS Assistant; qualified; aged 22; height 5 ft. 8 in.; 6 years' experience. H. W. Baker, Wellesley Road, Colchester.

LIVERPOOL or Manchester.—Assistant, in good Retail or Laboratory; by February 9th; Minor and Hall qualifications; aged 23. V. Cole, 95 St. John's Wood Terrace, London.

MANAGER; with or without view of succession; aged 50; long experience; country preferred; good references. "Murex," Bridgend House, Llanbadarn, Aberystwyth.

TO Chemists, Drysalts, and Druggists' Sundrymen.—Situation as Traveller or temporary Manager of a retail business. 135/2, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

ASSISTANT; unqualified; aged 31; good prescriber; extracts teeth; excellent reference; outdoors preferred; permanency. S. M., 2 Eva Cottages, Whitehorse Road, Croydon.

WANTED, by a gentleman, aged 32, an engagement to travel for a firm of wholesale druggists; good references and security if required. R. J., Housekeeper, 4 Trafalgar Square, Charing Cross.

RE-ENGAGEMENT by an energetic man, with tact and good practical experience in mixed-class businesses; not qualified; aged 38; height 5 ft. 8 in.; single. "Chemicus," 12 Chapel Street, Uxbridge, Middlesex.

MANAGER, Traveller, or any position of responsibility; 13 years' experience of the drug trade; excellent references; good address; set at 29; married. A. H., 20 Princes Street, Landport, Hants.

DENTIST wants Upper Part or Rooms over Chemist, with private entrance; good neighbourhood; West of London preferred. Address, Fleming, Dentist, George Street, Luton, Beds.

MISCELLANEOUS.

Special charges are made for Advertisements under this heading, which can be obtained on application.

WANTED, for cash, Patent Medicine or Proprietary Articles producing at present a reliable £200 net. Particulars and price to "Factor," 60 Great Eastern Street, E.C.

AN Agent is required by an Italian establishment for the sale (Wholesale only) of Olive Oil on the markets of London and Dublin. Offers, accompanied by first-class references, must be addressed to 233/58, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

CENTRAL INSTITUTION OF THE CITY AND GUILDS OF LONDON INSTITUTE.

TECHNICAL CHEMISTRY.—A Course of Lectures on the Chemistry of OILS (Mineral and Vegetable) and FATS, by DR. A. K. MILLER, Assistant in Research Laboratory, will commence on Monday, January 23, at 4 P.M. Fee for the Course, £1. For further particulars, apply at the Central Institution, Exhibition Road, S.W.

PHILIP MAGNUS, Organising Director.

A VALUABLE SPECIAL AGENCY.

DR. BIRLEY'S Preparations.—Large and Ready Sales.—48 page Pamphlets, gold covers, show-cards, &c., free; write to-day for samples. Gordon Murray & Co., 50 Theobalds Road, Holborn, W.C. Sole agents for Great Britain and India. "Baby's Blessing" and "Anti-Catarrh" may also be had.

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LEICESTER.**

The next issue of the "CHEMIST AND DRUGGIST" set apart for the insertion of Circulars, Price Lists, &c., is that of Jan. 28, 1888. Please apply early to the Publisher, 42 Cannon Street, E.C., for full particulars.

OUR WEEKLY SUPPLEMENT.

We have prepared a set of forms for small advertisements (assistants wanted, businesses for disposal, exchange column, &c.). With these are attached tables of useful reference matter (Sale of Poisons, Postal Information, Annual Licences, Metric Weights, Measures, Medicine Stamps, Law and Public Offices, &c.). We shall be glad to send one of these sets to any subscriber who will send us an addressed postal wrapper (bearing a halfpenny stamp). As the object of this production is to encourage the insertion of such advertisements as we have named in THE CHEMIST AND DRUGGIST, we hope this offer will be taken advantage of chiefly by those subscribers who are willing to use this journal whenever opportunities occur.

OFFICES: 42 CANNON STREET, LONDON, E.C.

EXCHANGE COLUMN.

Limited to the Advertisement of Surplus Stock, Formulæ, Addresses Wanted, and Articles Wanted.

TERMS.

Advertisements in this department must be paid for in advance. From this rule no deviation can be made. Insertions are charged at the rate of 1d. per word, provided the advertiser attaches his name and address, for each word of which he must also pay at the same rate; or if he pays 1d. per word, his name and address will be registered and a figure attached to his advertisement. All correspondence referring to this figure must be addressed to "The Publisher of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C., " and the figure must be distinctly endorsed upon the envelope. Letters will then be forwarded to their proper destination. A price is counted as one word, as *e.g.*, £1 10s. 6d.

NOTICE.—No Advertisement is inserted in this section for less than Sixpence.

[illegible]

If you have no surplus stock to Advertise just now, keep this Form for future use.